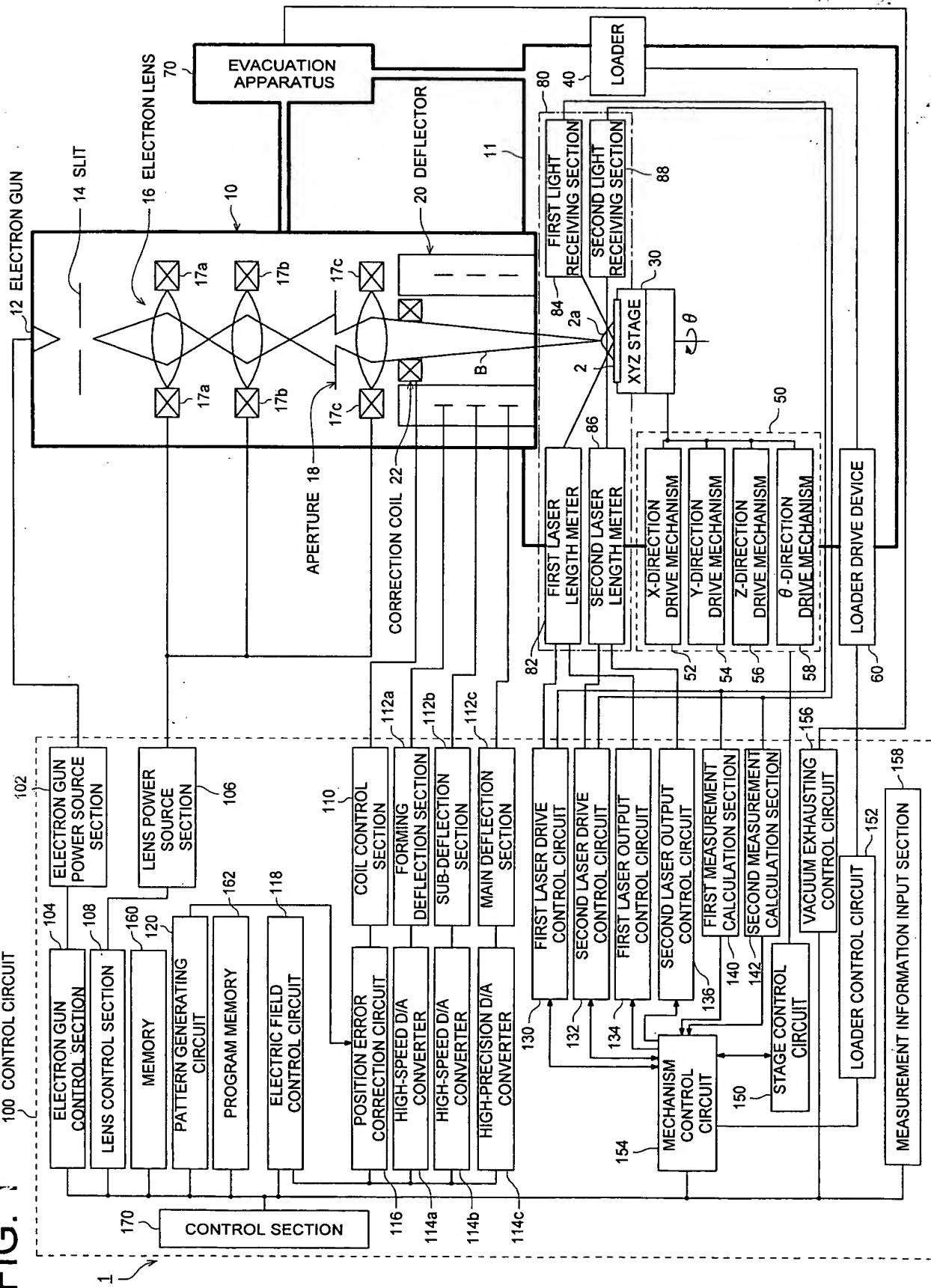
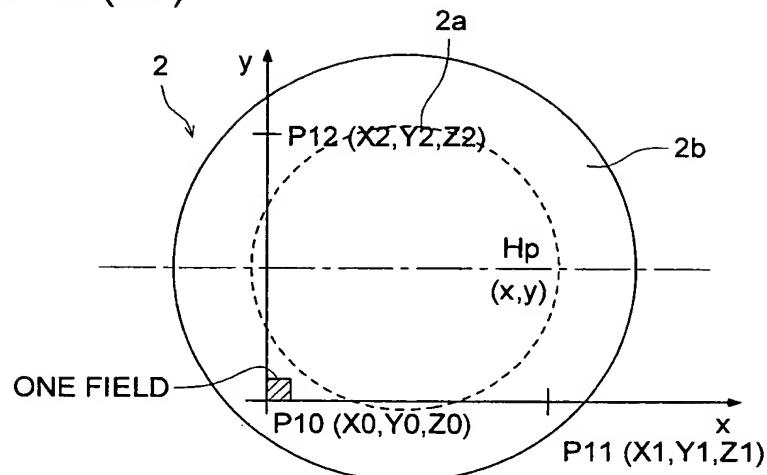


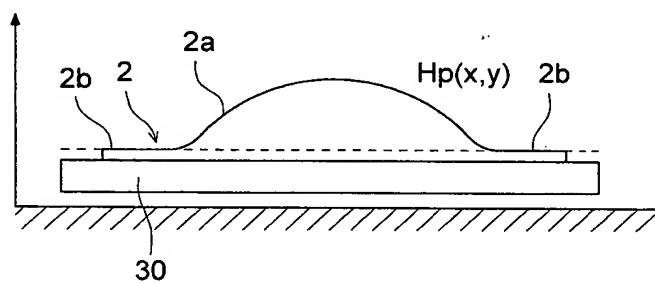
FIG. 1 100 CONTROL CIRCUIT



**FIG. 2 ( A )**



**FIG. 2 ( B )**



**FIG. 2 ( C )**

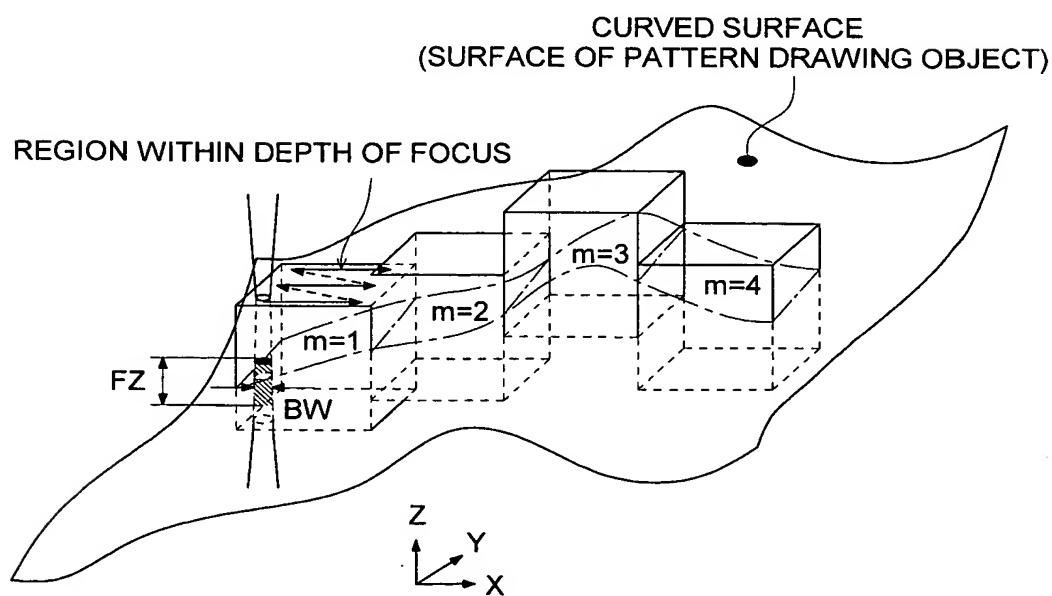


FIG. 3

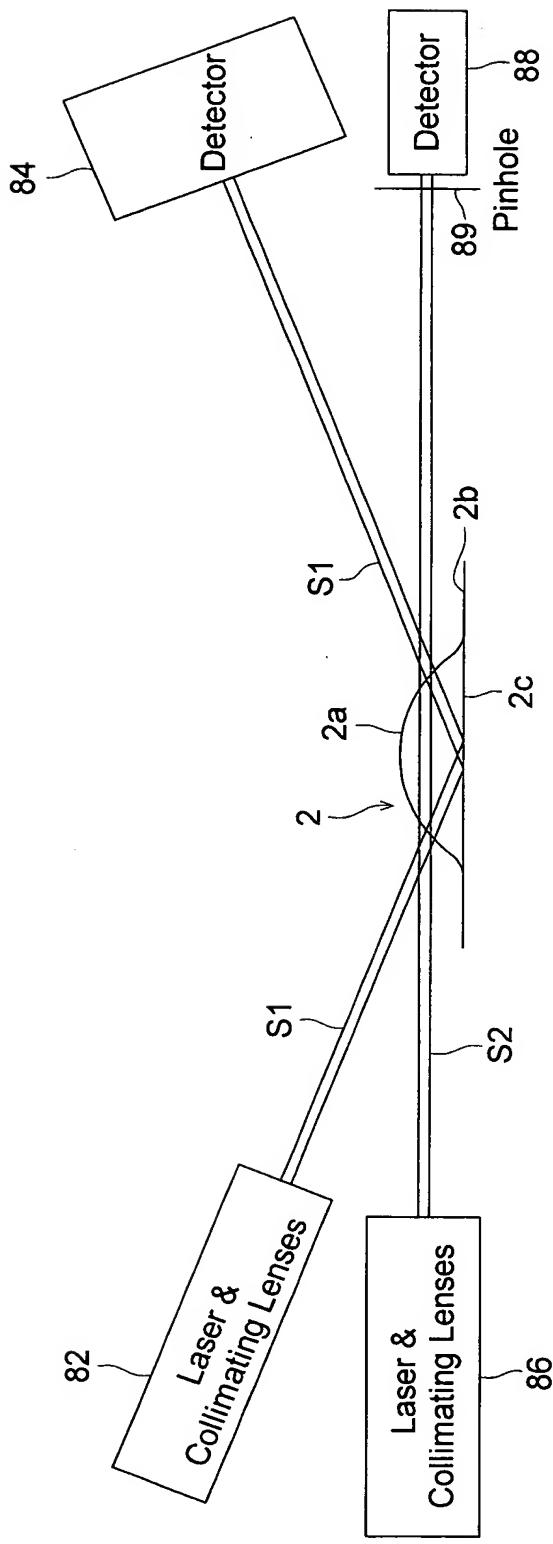
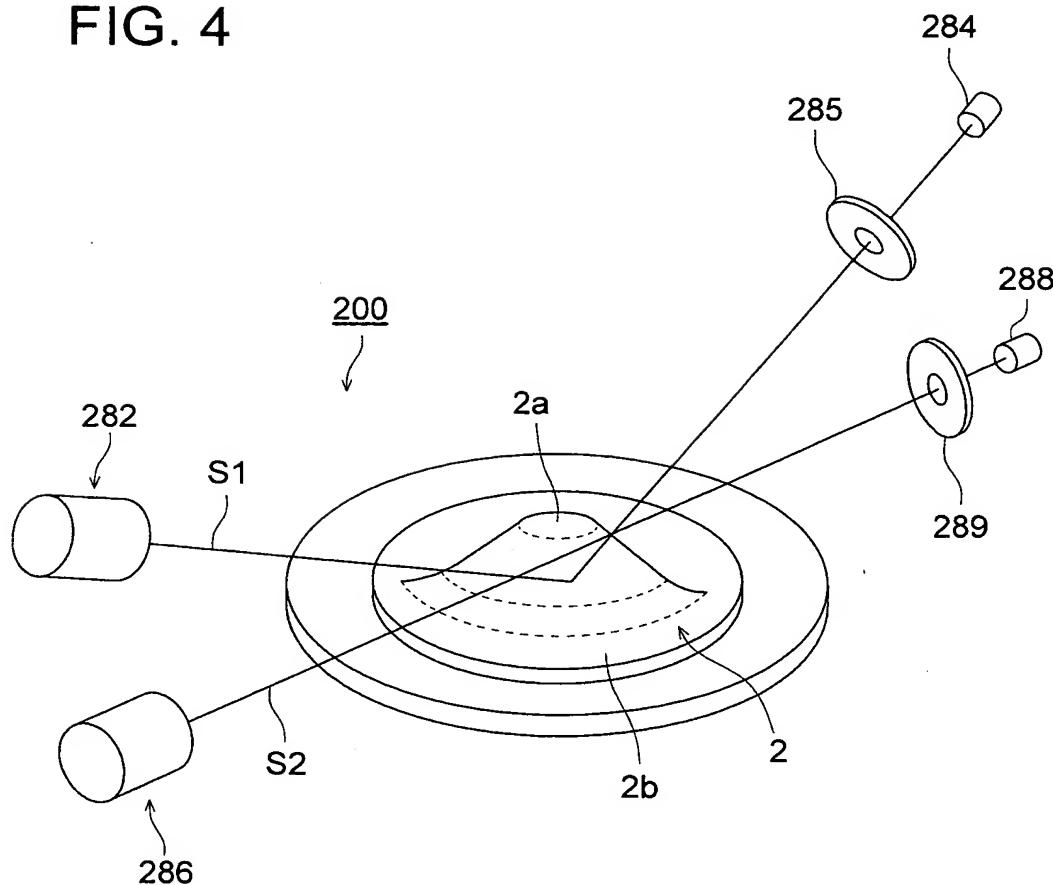


FIG. 4



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FIG. 5 (A)

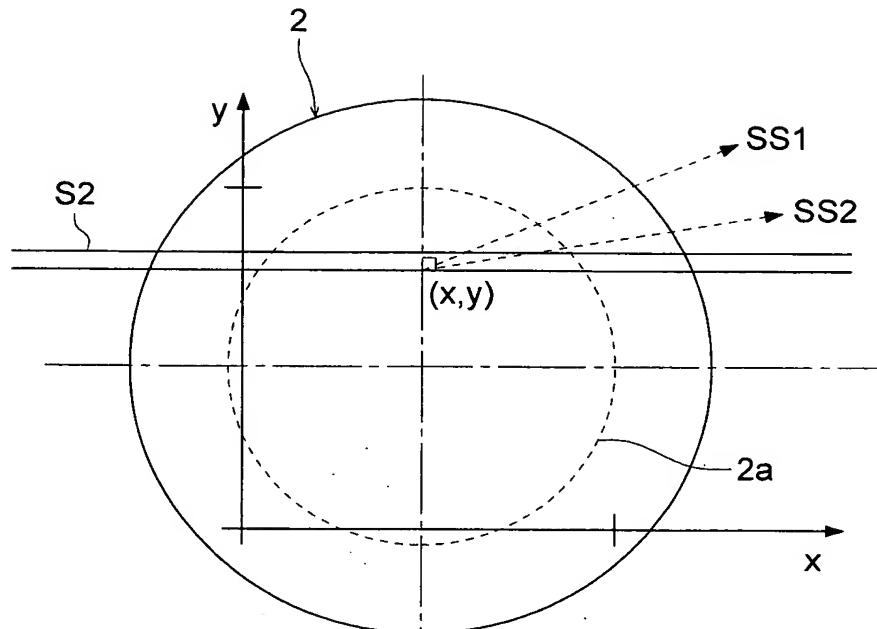


FIG. 5 (B)

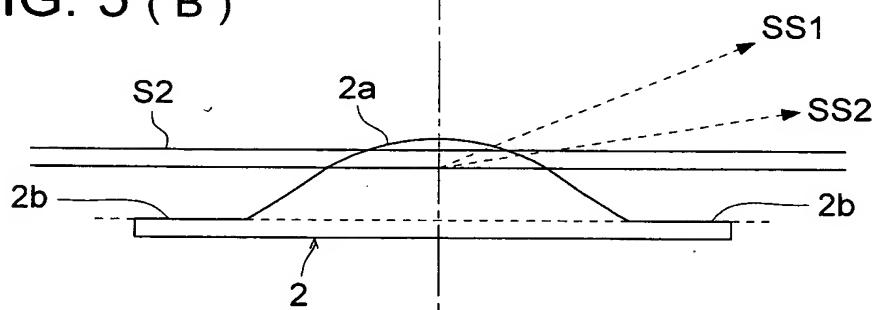


FIG. 5 (C)

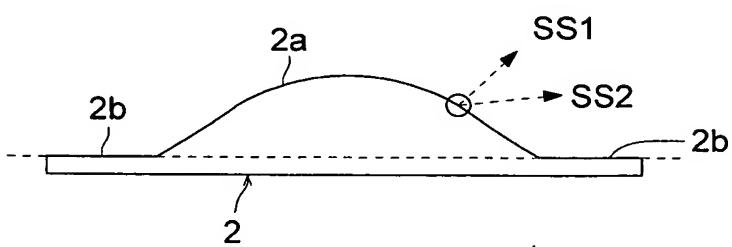


FIG. 6

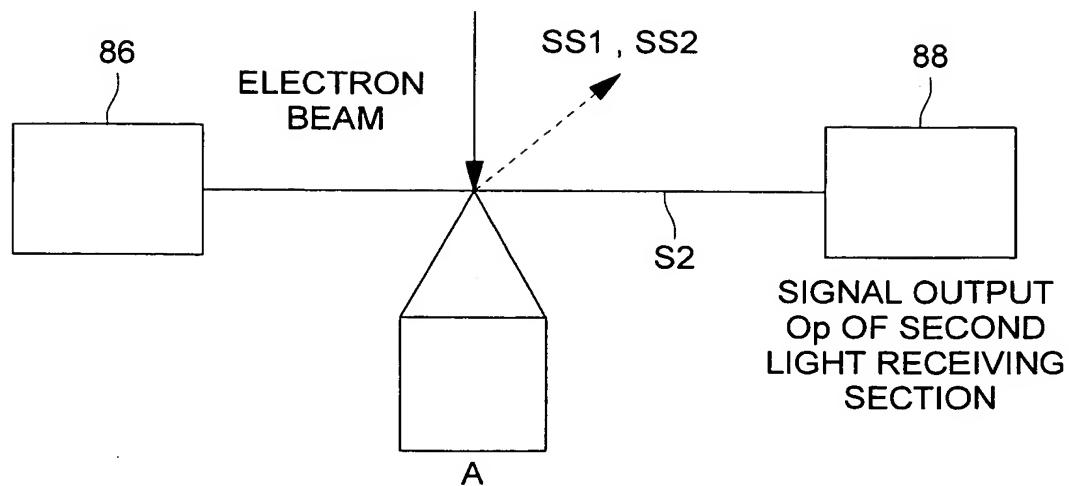


FIG. 7

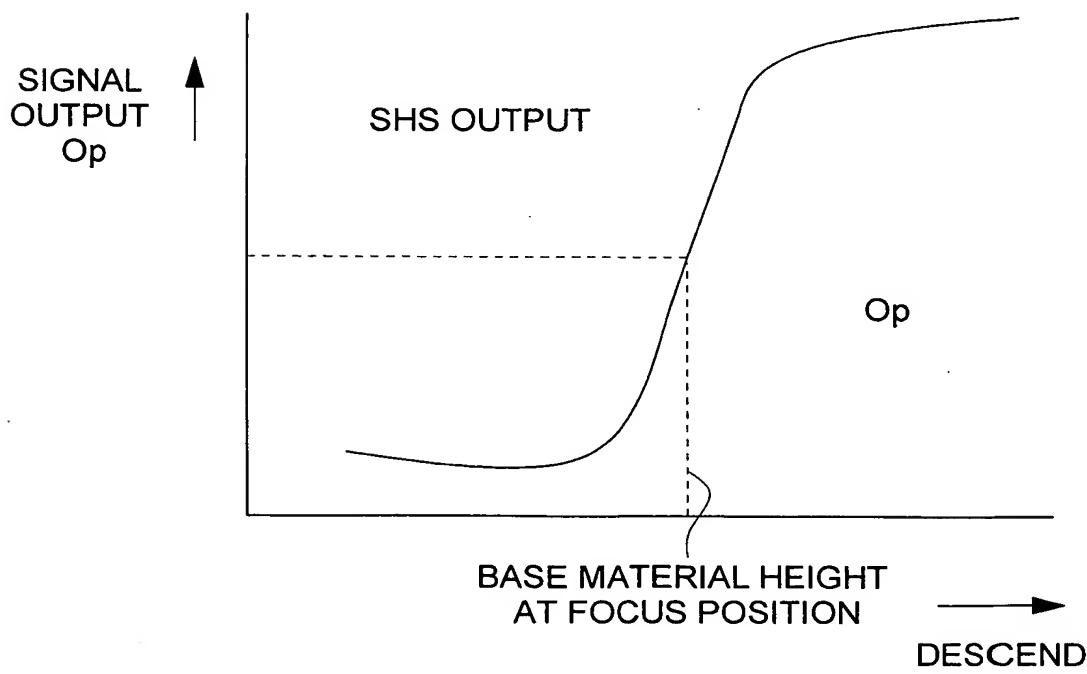


FIG. 8

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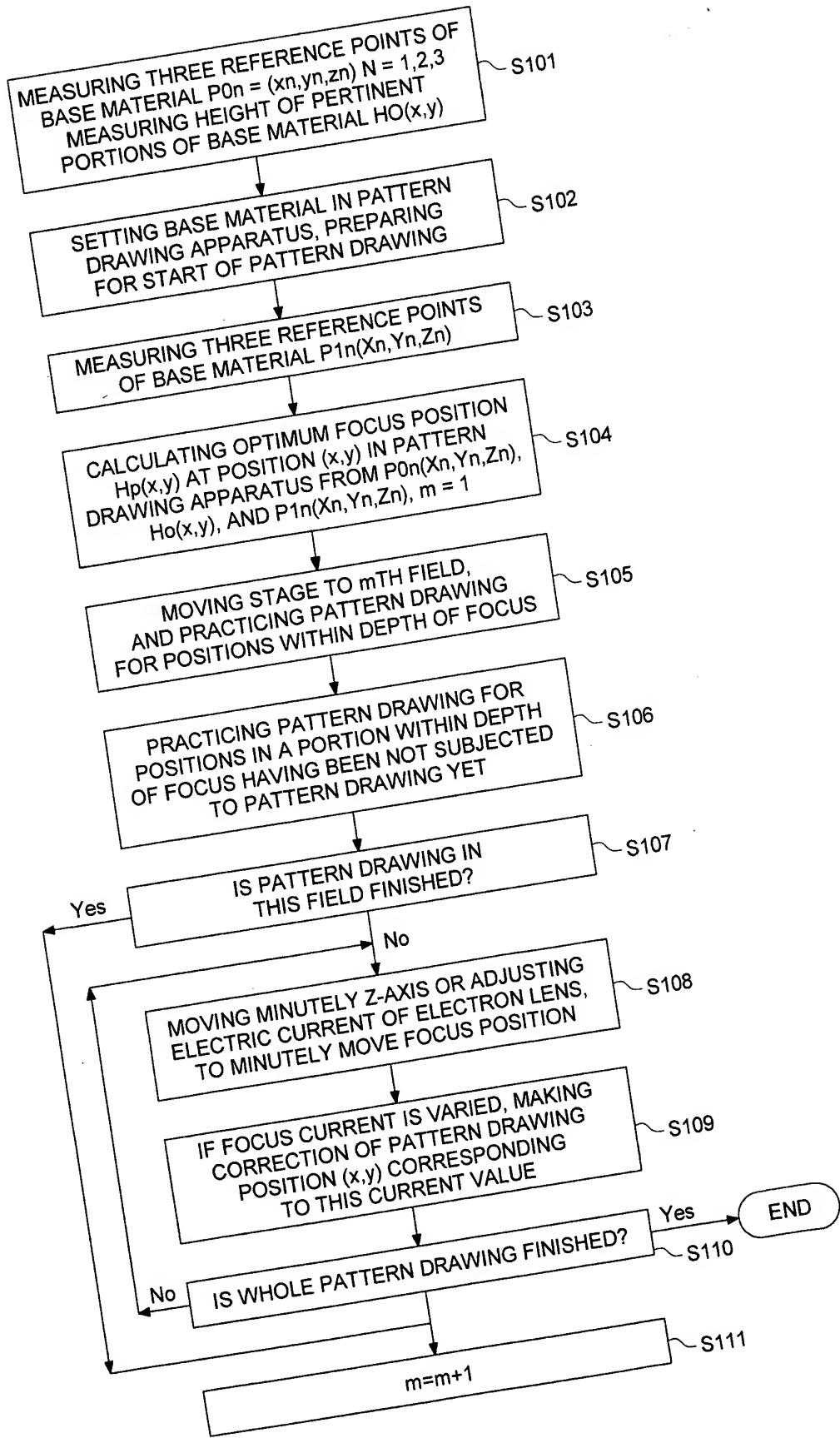
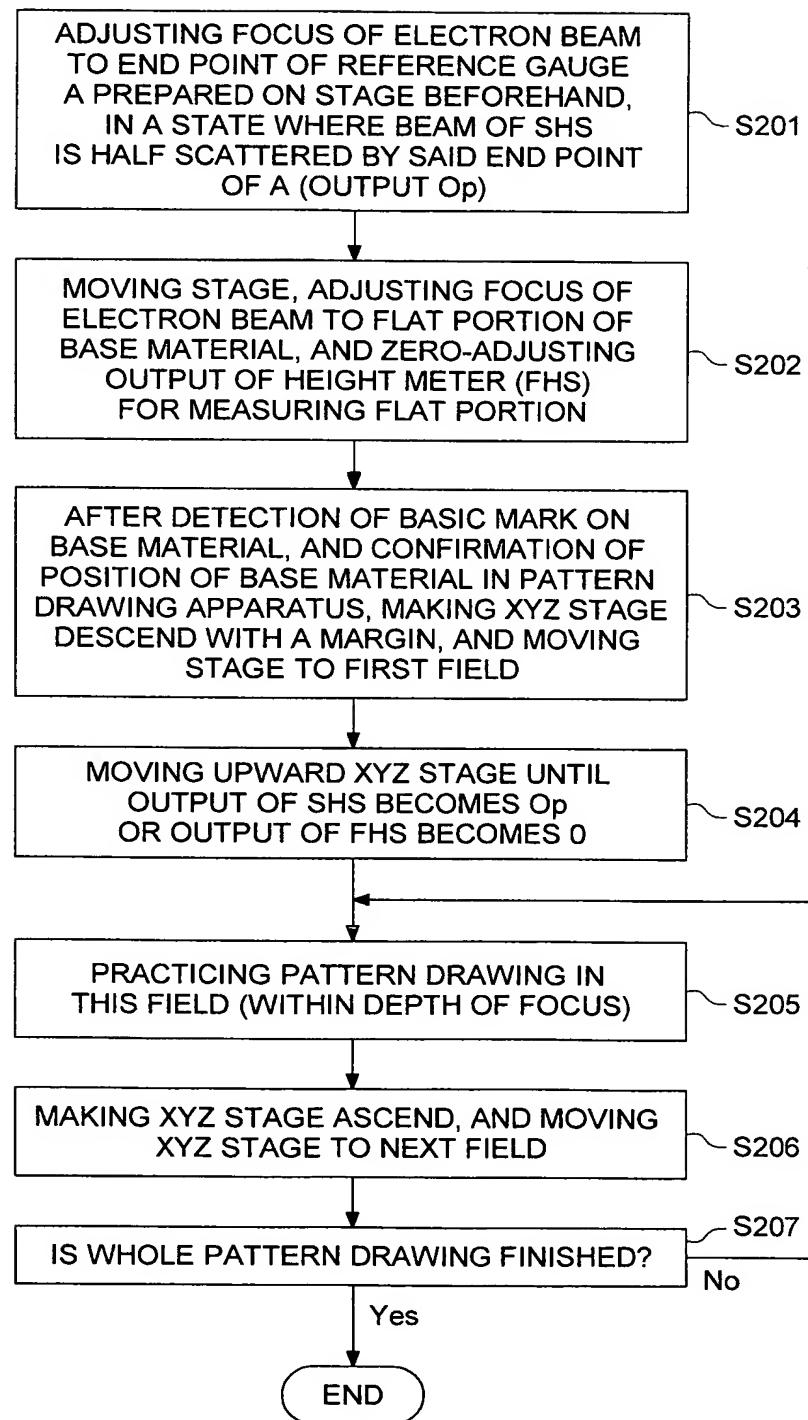


FIG. 9



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FIG. 10

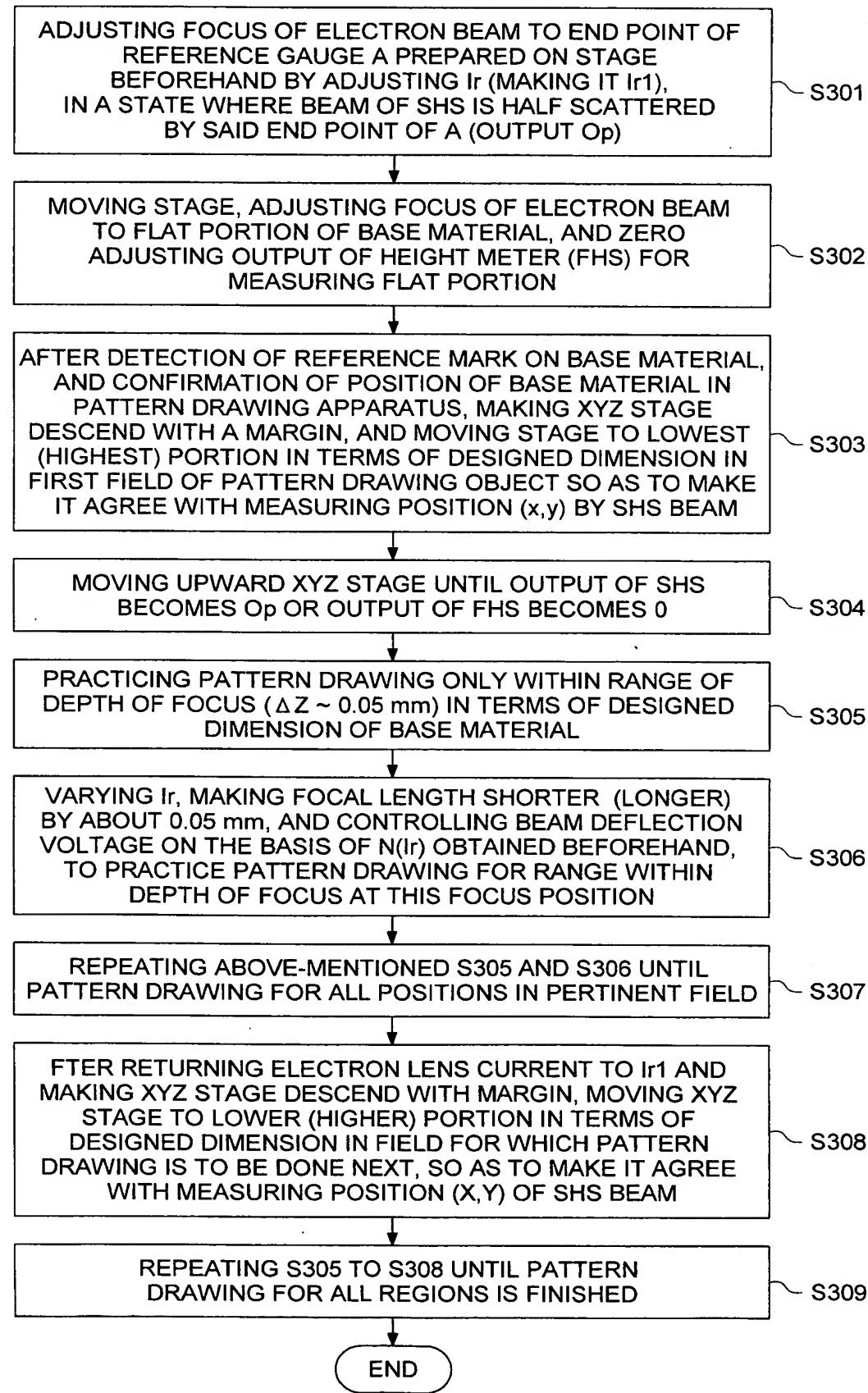


FIG. 11

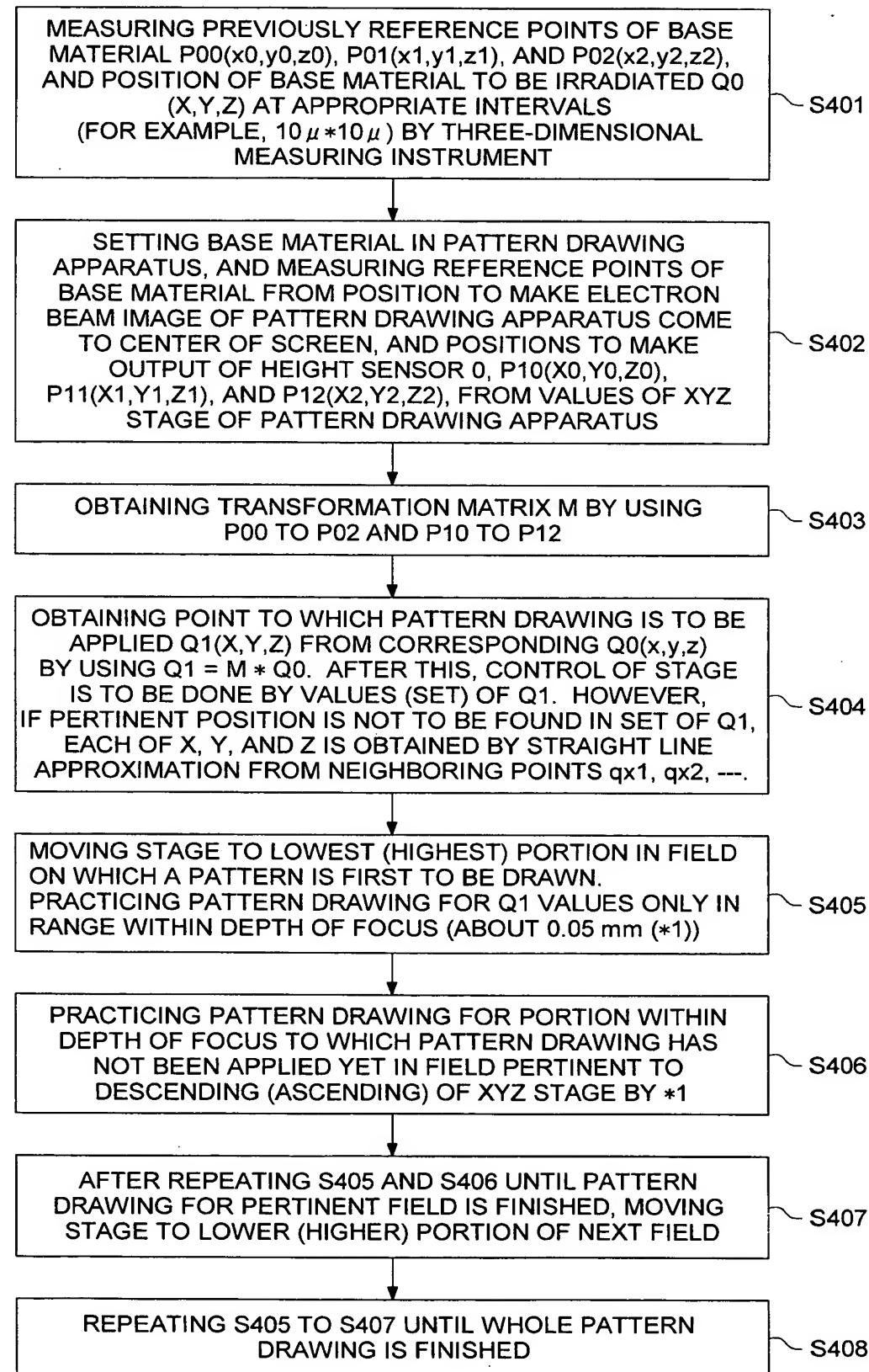
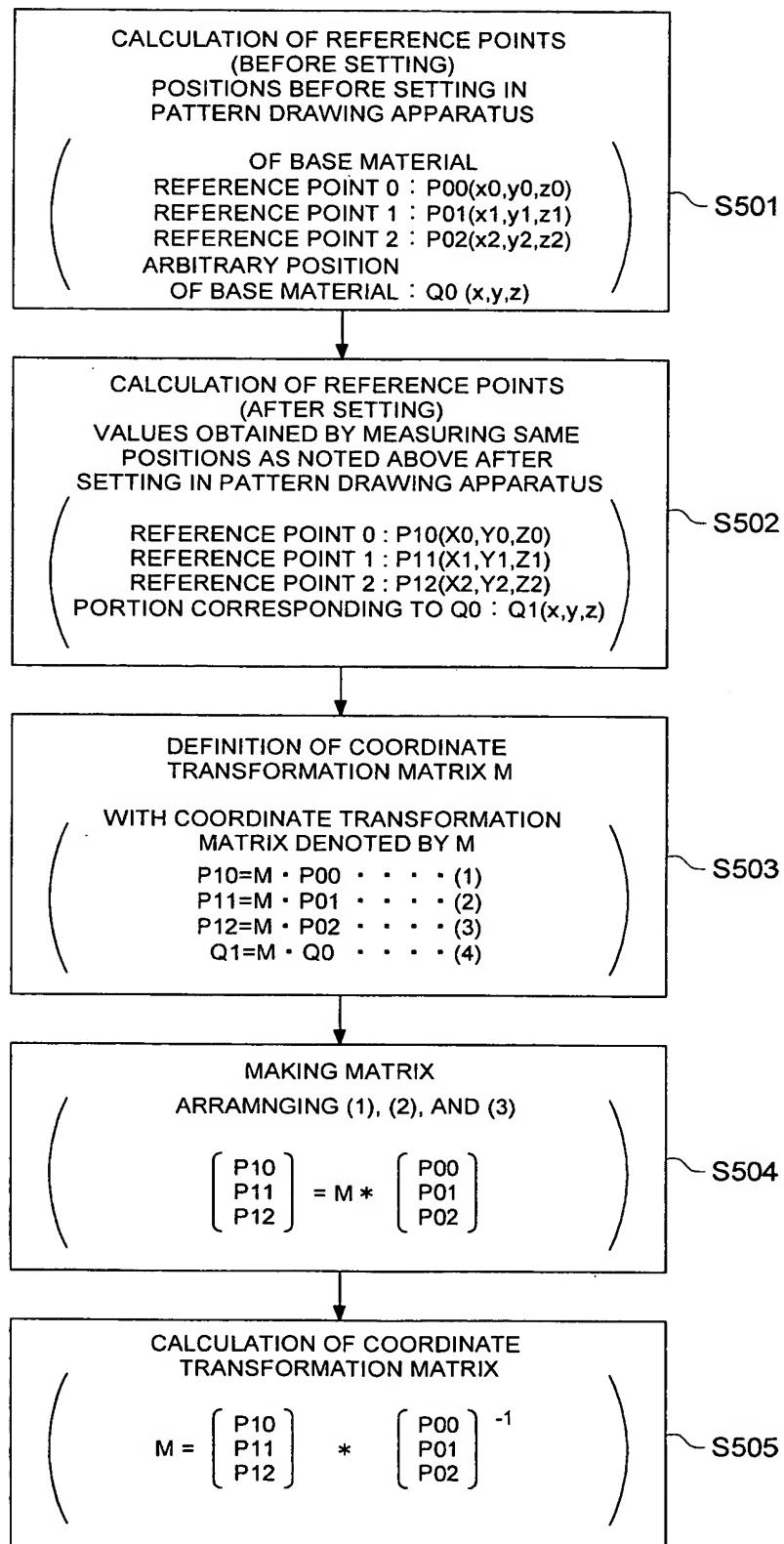
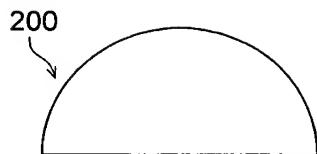


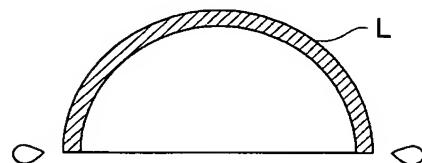
FIG. 12



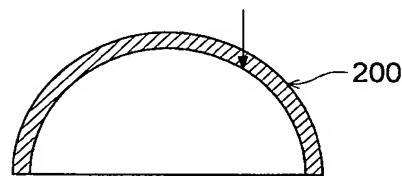
**FIG. 13 ( A )**



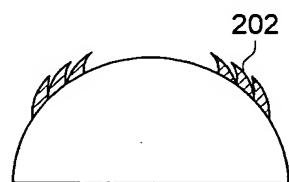
**FIG. 13 ( B )**



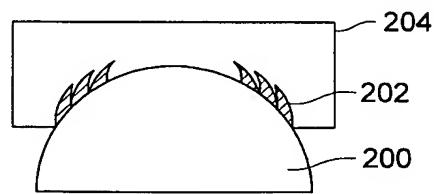
**FIG. 13 ( C )**



**FIG. 13 ( D )**



**FIG. 13 ( E )**



**FIG. 13 ( F )**

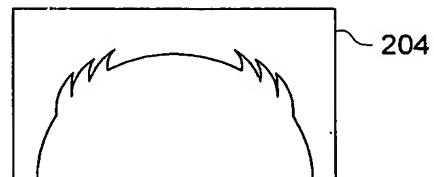


FIG. 14

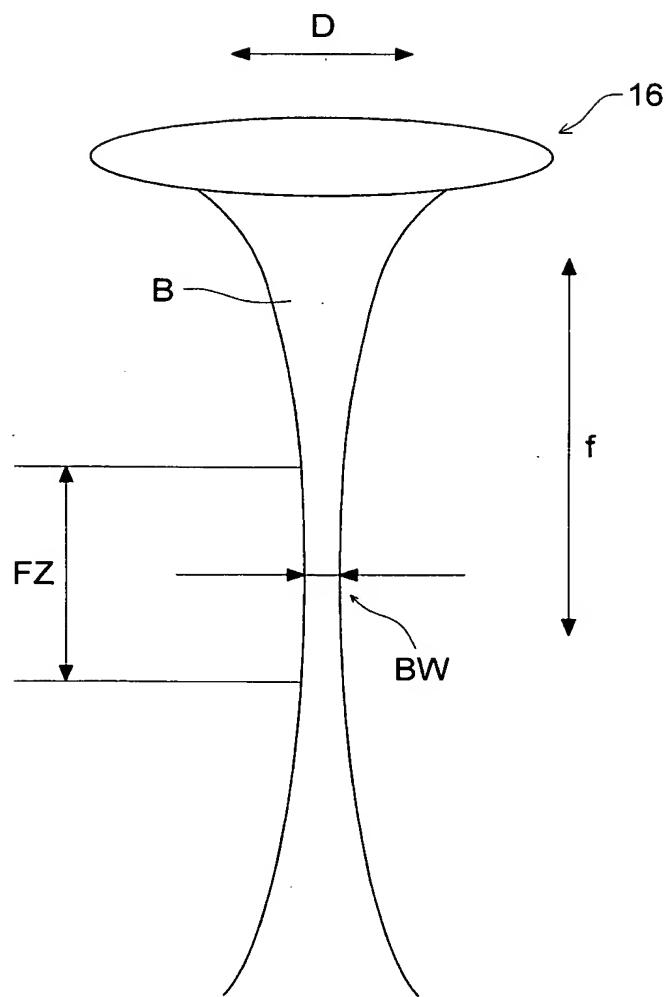


FIG. 15

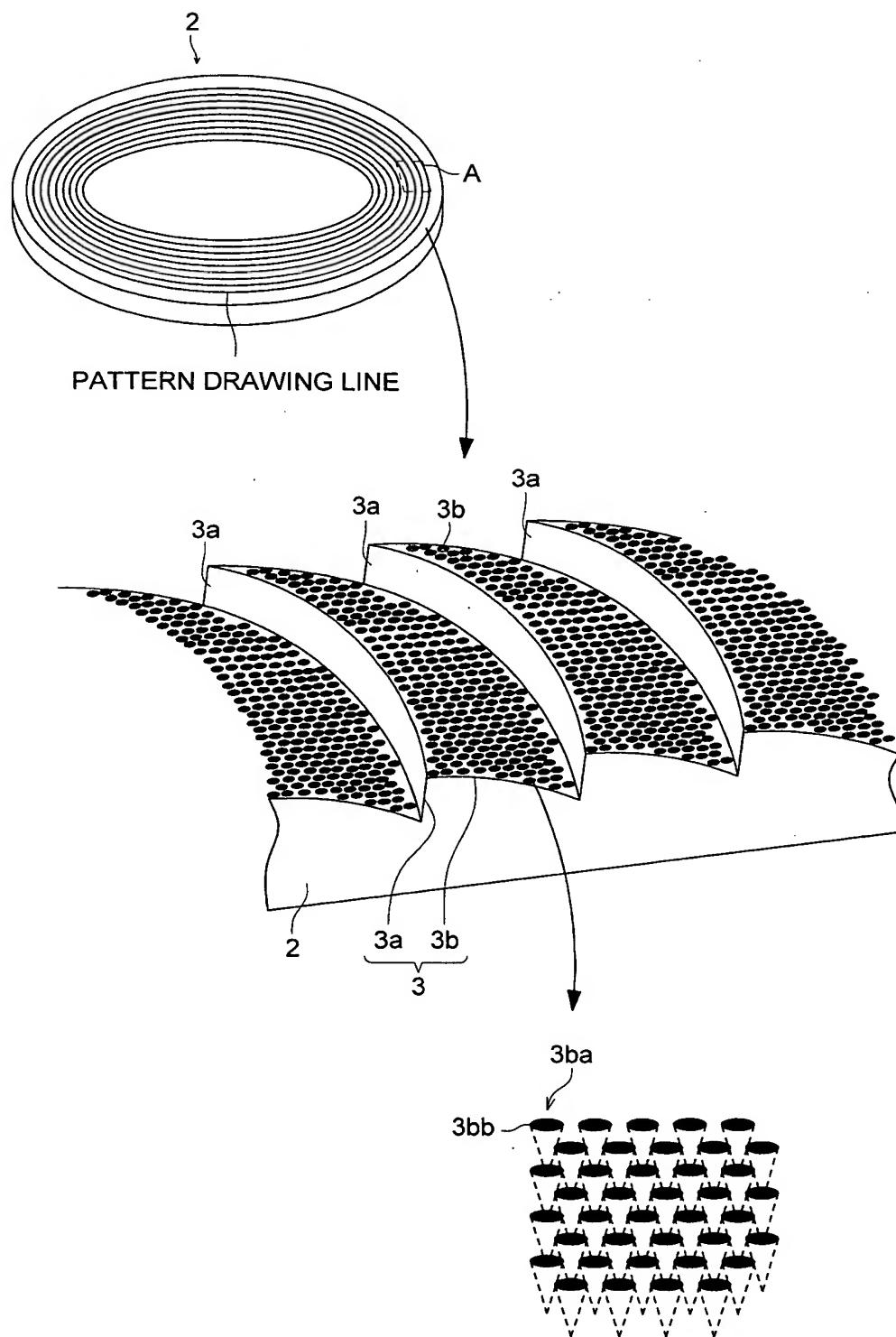
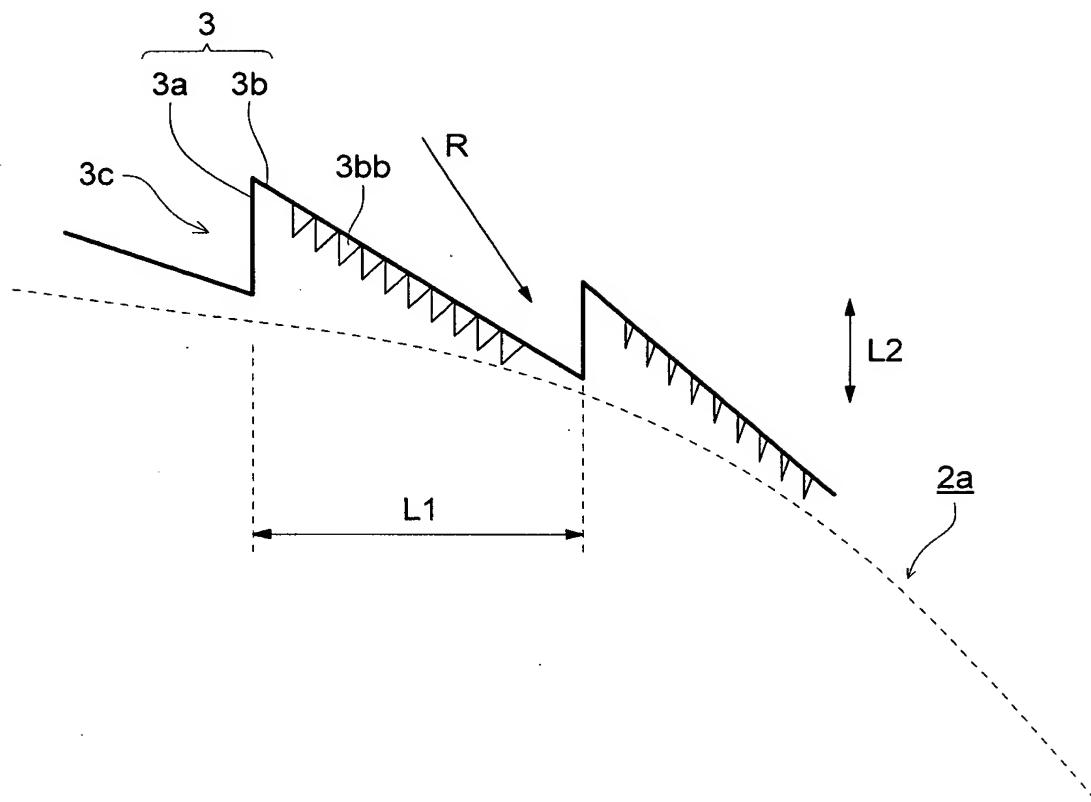


FIG. 16



上卷

FIG. 17

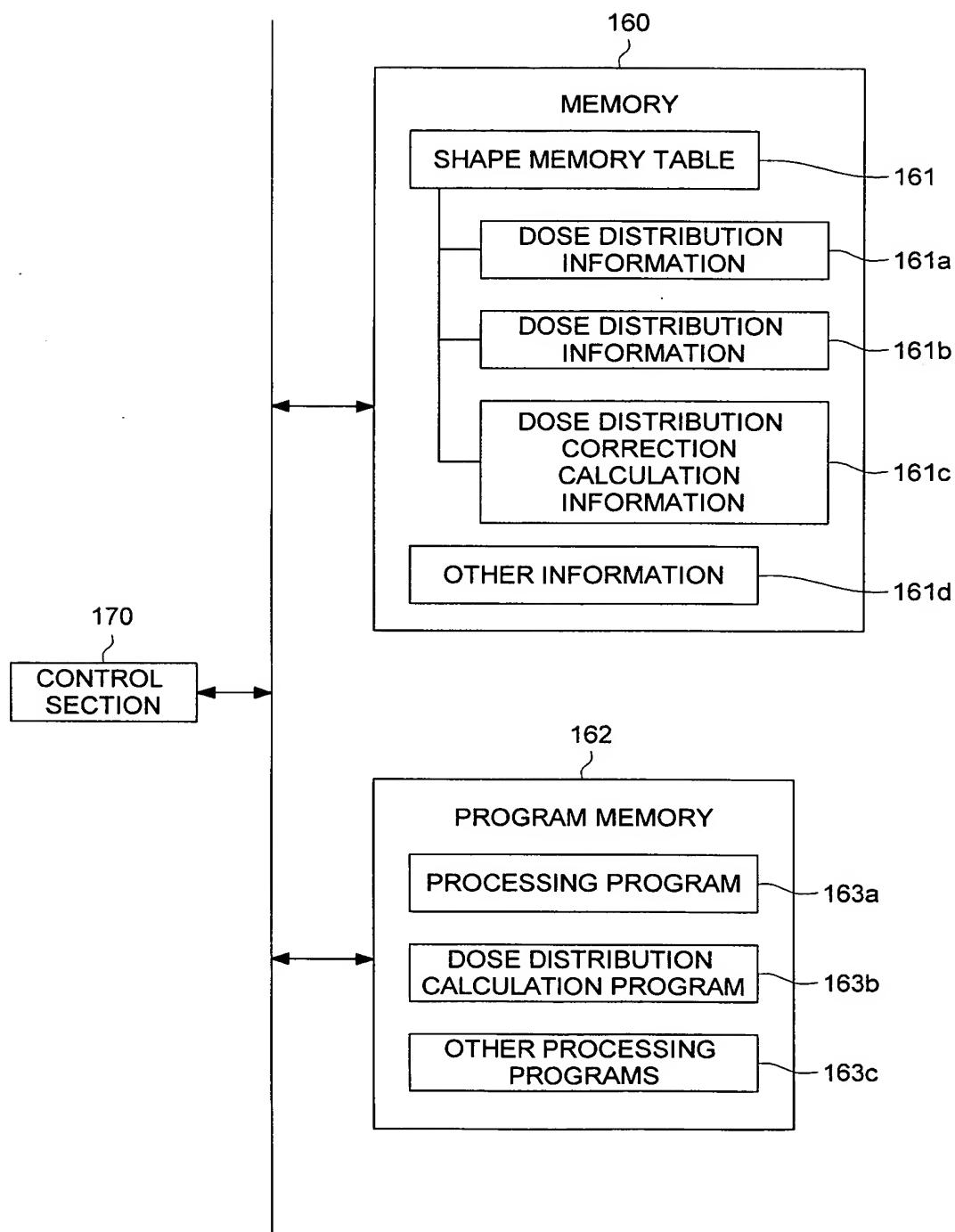


FIG. 18

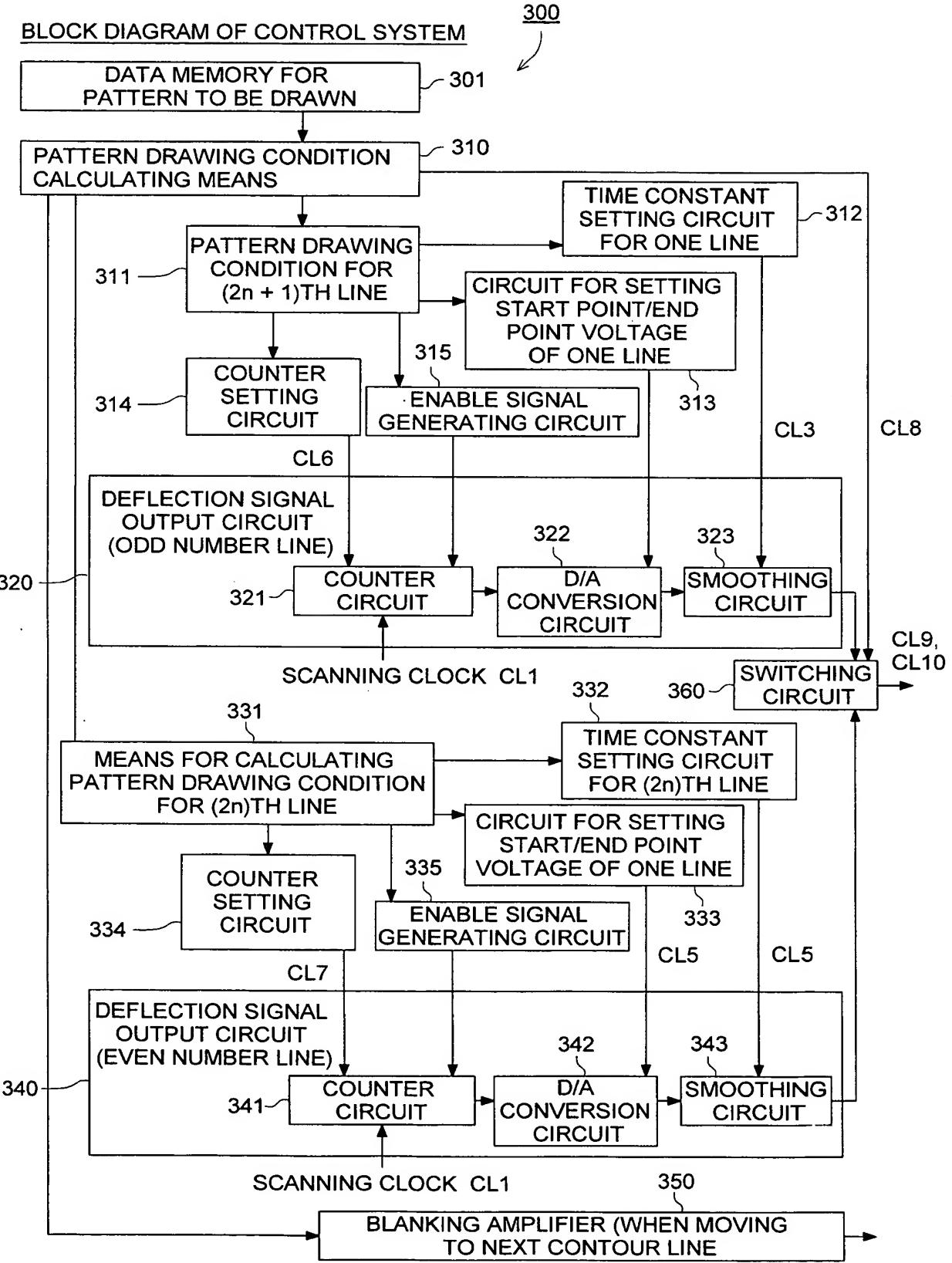


FIG. 19

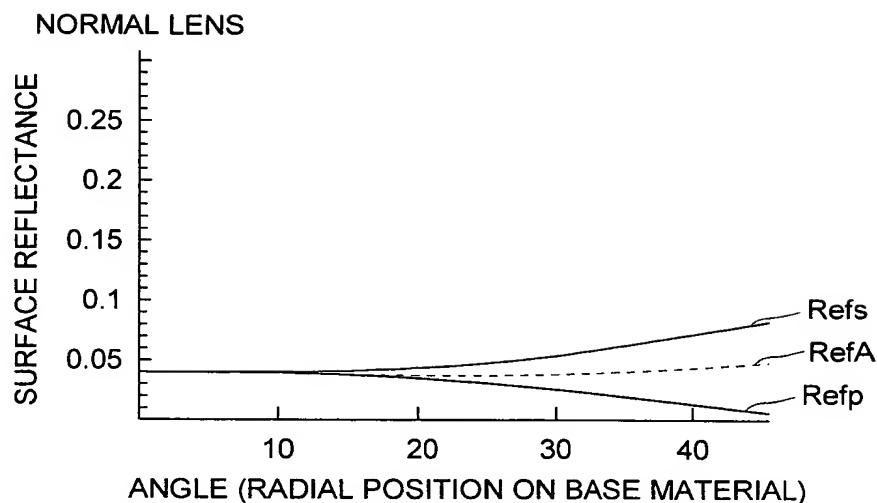


FIG. 20

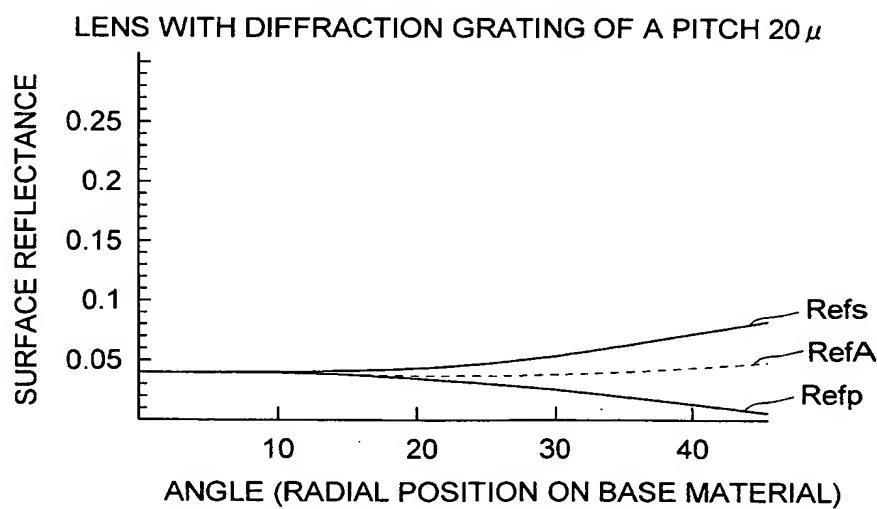


FIG. 21

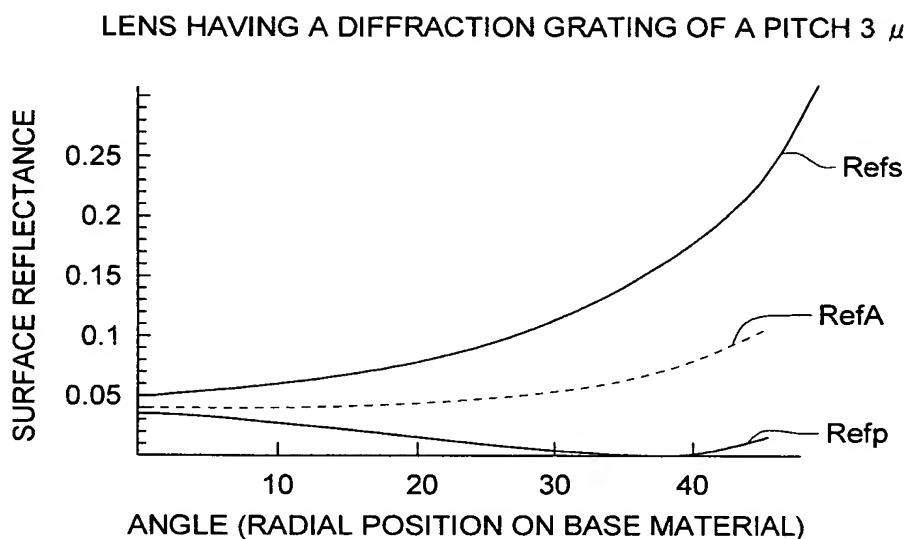


FIG. 22

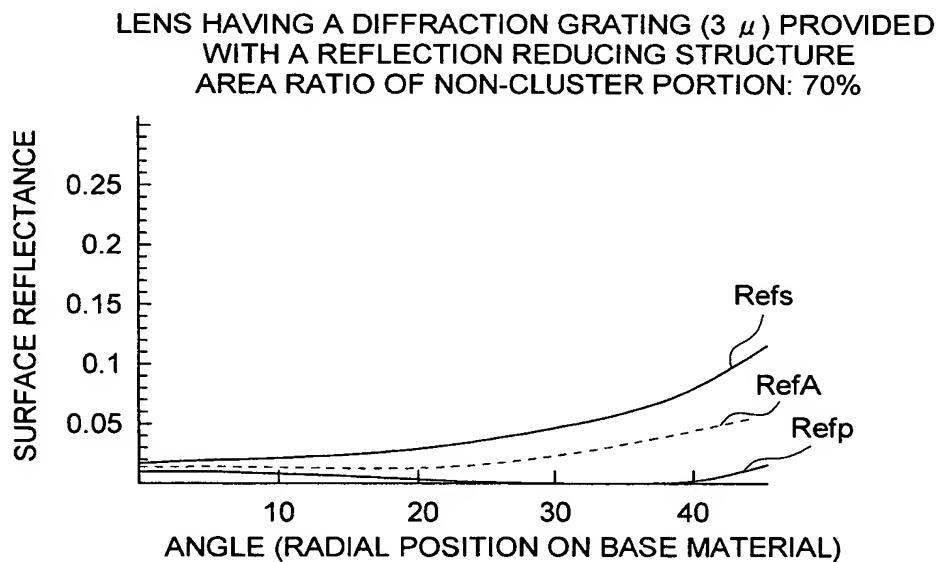


FIG. 23

```

n2 := 1.5 (*REFRACTIVE INDEX*)
s := 0.7 (*AREA RATIO OF NON-CLUSTER PORTION*)
n1 := n2* √s
β := 20 (*BLAZE ANGLE OF DIFFRACTION GRATING*)
ψ := (org ψ + β) *3.141592 / 180 ----- (11)
χ := ArcSin [ Sin[ψ] / n1 ] (*REFRACTIVE INDEX*) -- (12)
Refp := (Tan [ψ - x])2 / (Tan [ψ + x])2 ----- (13)
Refs := (Sin [ψ - x])2 / (Sin [ψ + x])2 ----- (14)
RefA := Refp + Refs / 2 ----- (15)

```

S11

```

s := 1 (*NORMAL*)
β := 0
Plot { {Refs, Refp, RefA} , {org ψ, 0.45} , PlotRange → {0,0.3} ,

```

S12

```

s := 1 (*LENS HAVING A DIFFRACTION GRATING OF A PITCH 20 μ *)
β := 3
Plot { {Refs, Refp, RefA} , {org ψ, 0.45} , PlotRange → {0,0.3} ,

```

S13

```

s := 1 (*LENS HAVING A DIFFRACTION GRATING OF A PITCH 3 μ *)
β := 20
Plot { {Refs, Refp, RefA} , {org ψ, 0.45} , PlotRange → {0,0.3} ,

```

S14

```

s := 0.7 (*LENS HAVING A DIFFRACTION GRATING OF A PITCH 3 μ
PROVIDED WITH A SURFACE REFLECTION REDUCING
β := 20 STRUCTURE*)
Plot { {Refs, Refp, RefA} , {org ψ, 0.45} , PlotRange → {0,0.3} ,

```

S15

FIG. 24

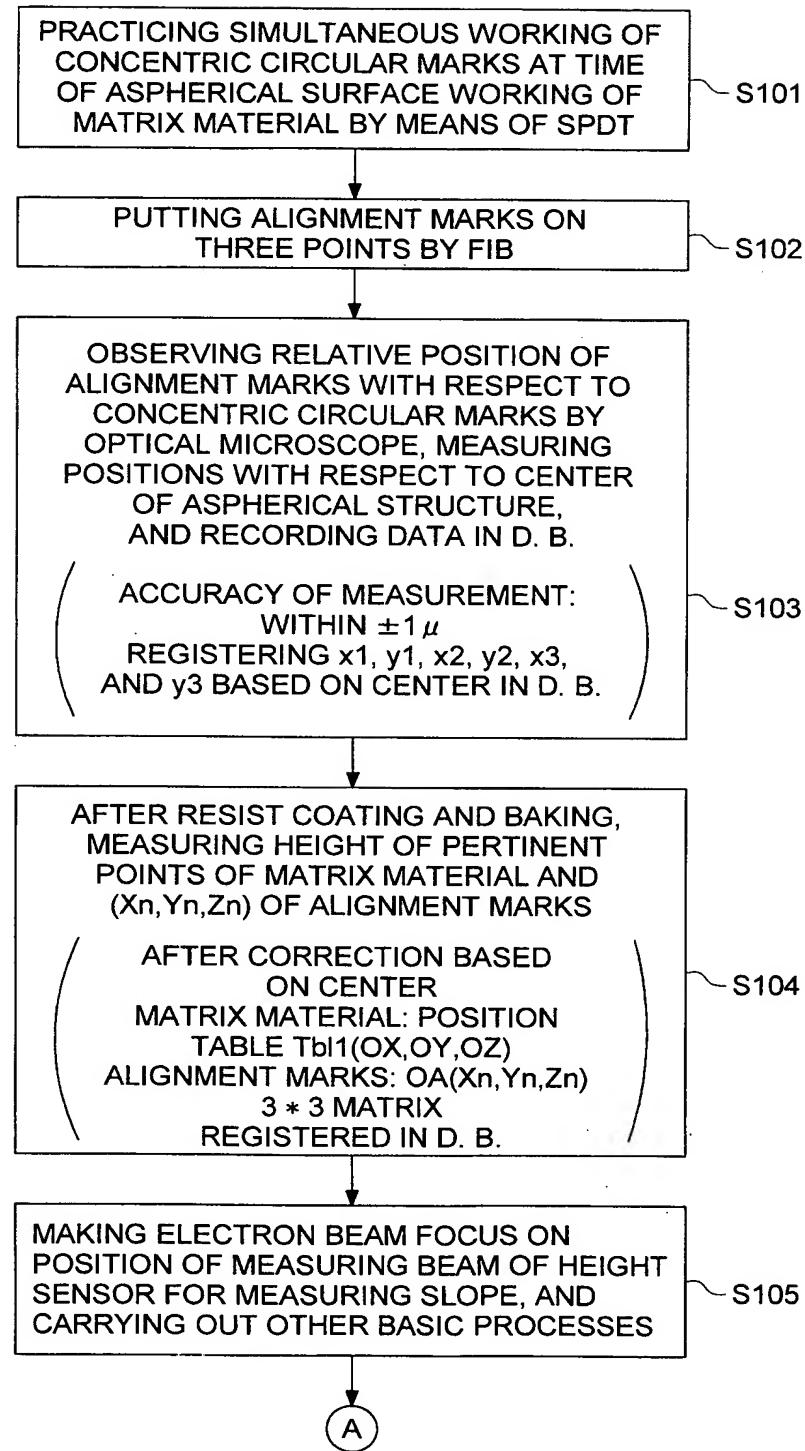
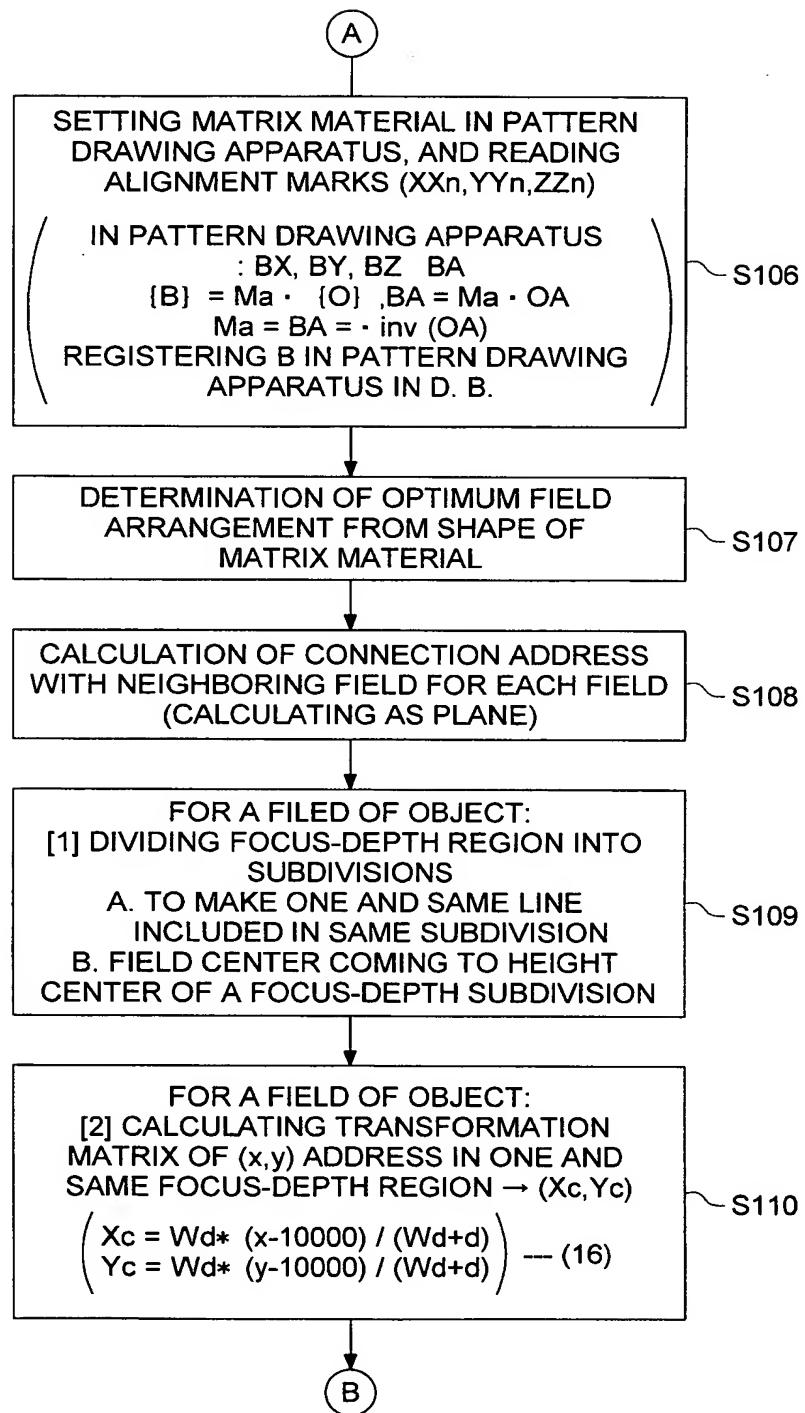
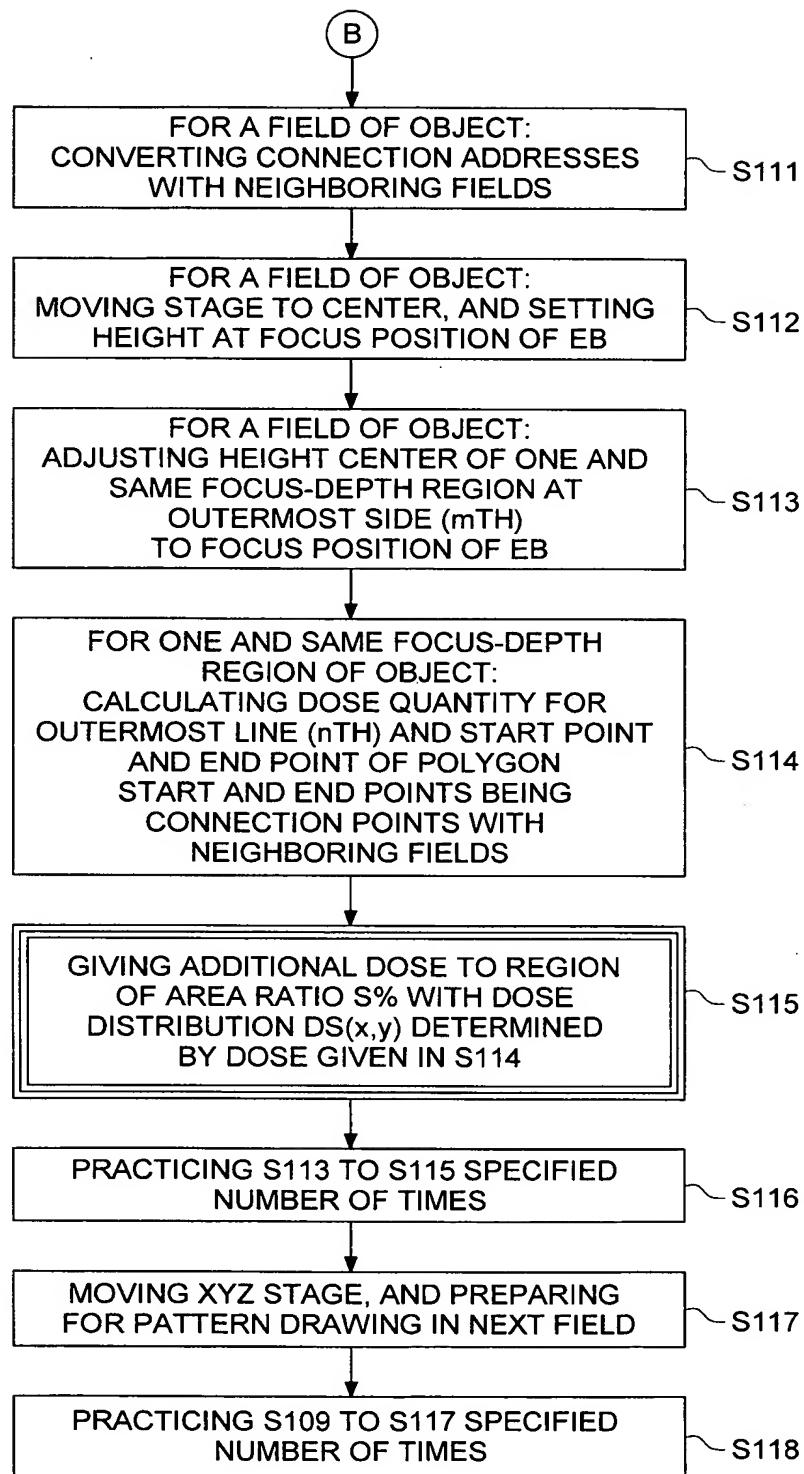


FIG. 25

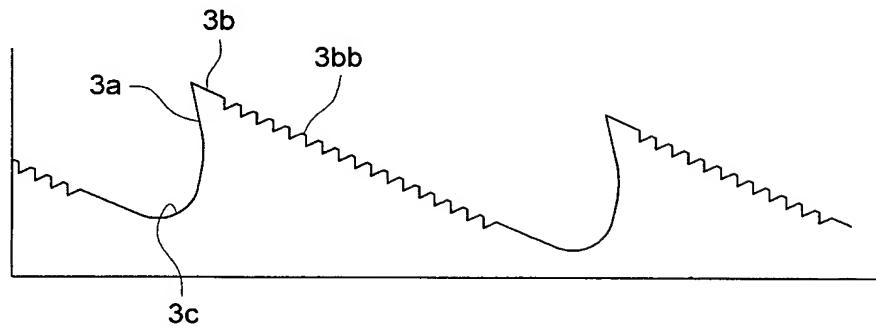


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FIG. 26



**FIG. 27 ( A )**  
PATTERN TO BE DRAWN



**FIG. 27 ( B )**  
DOSE DISTRIBUTION

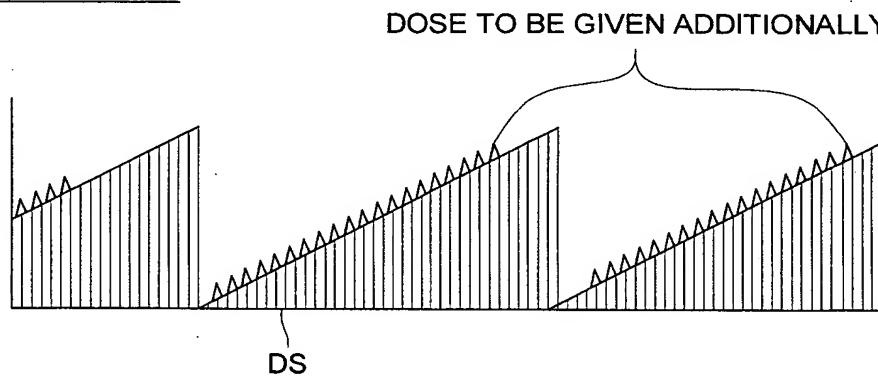


FIG. 28 ( A )

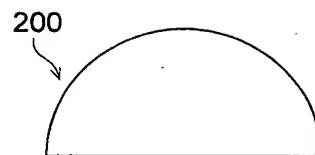


FIG. 28 ( B )

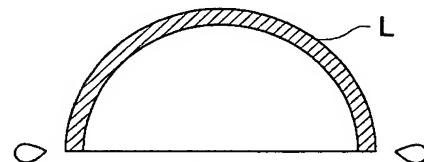


FIG. 28 ( C )

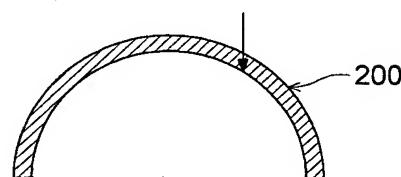
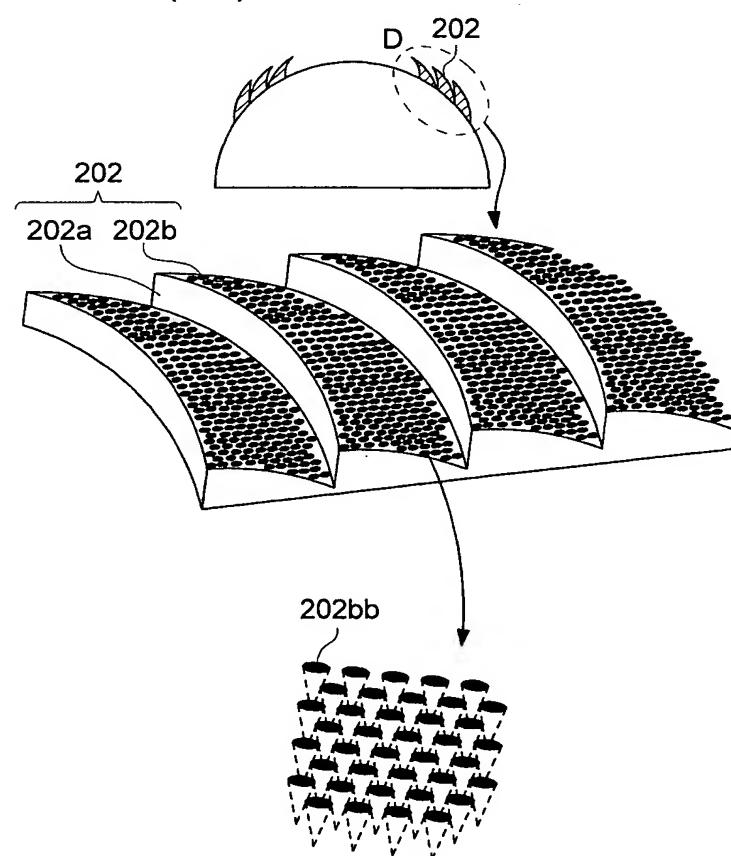


FIG. 28 ( D )



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FIG. 29 (A)

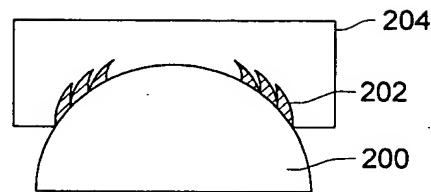


FIG. 29 (B)

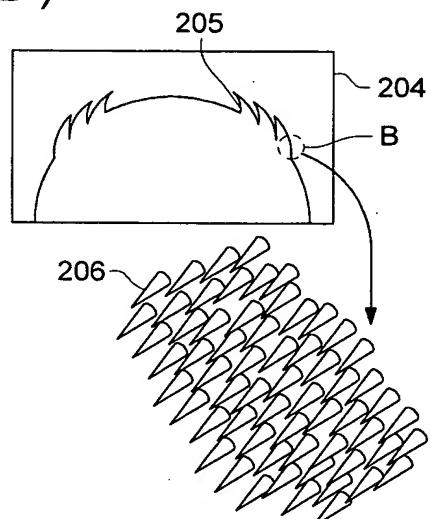


FIG. 29 (c)

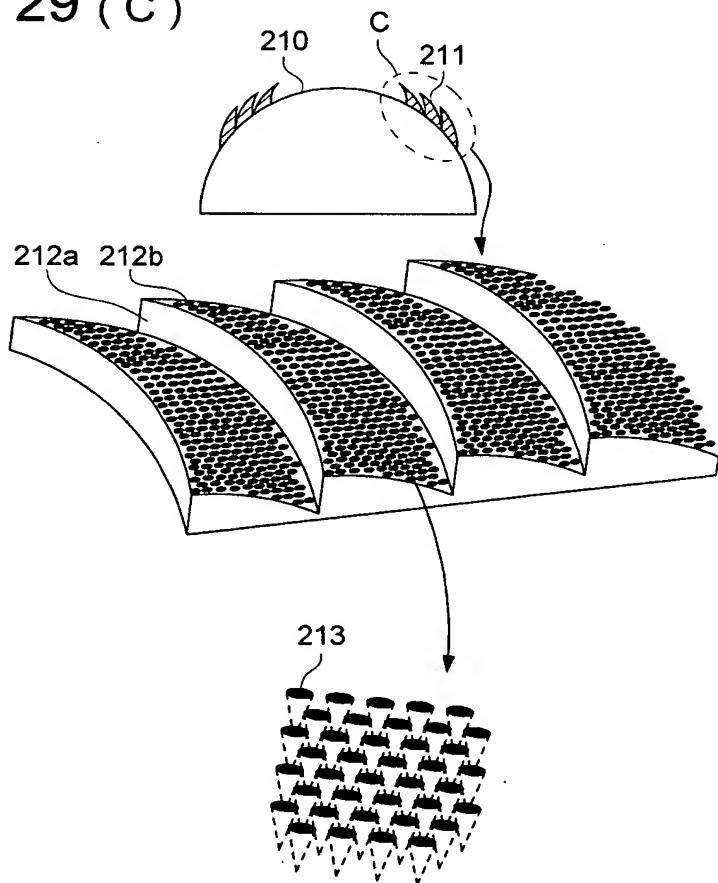


FIG. 30

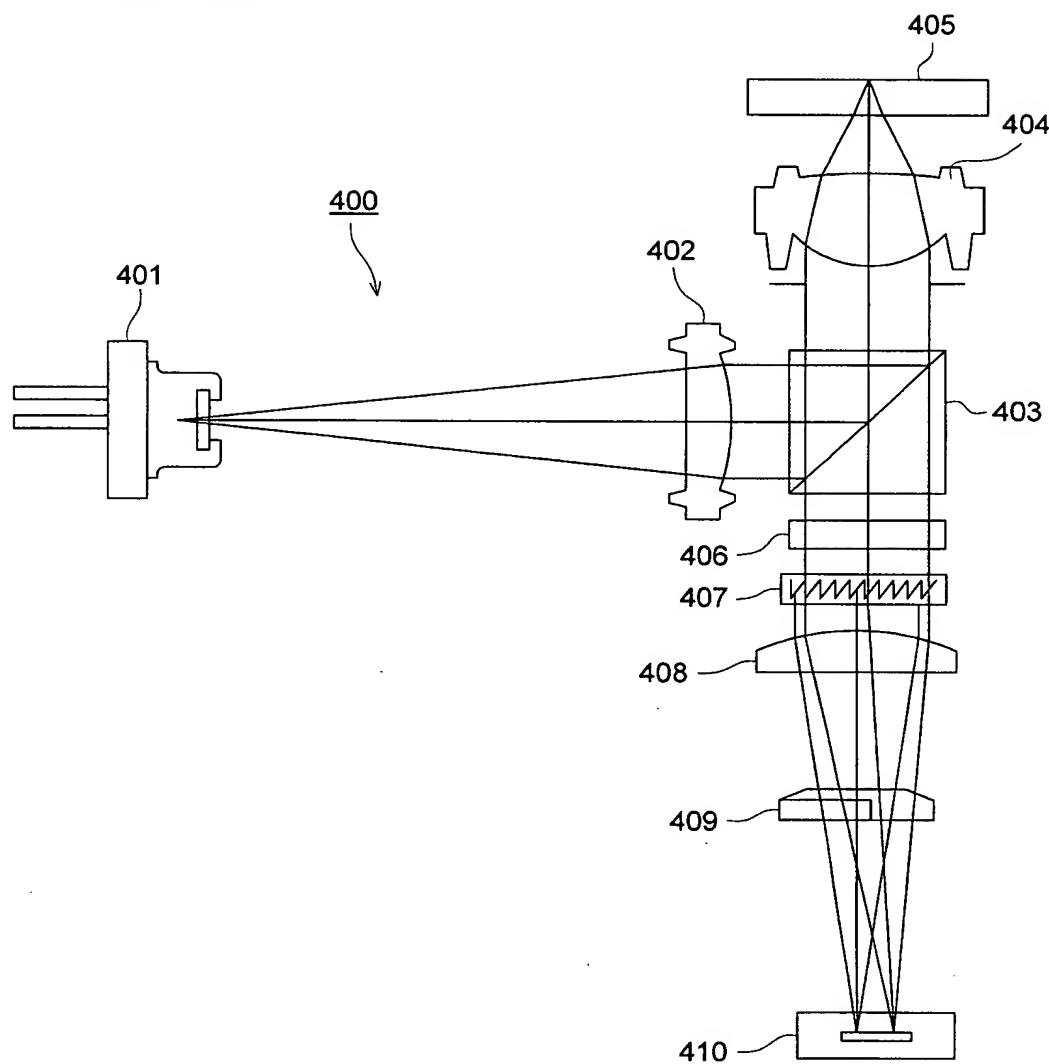


FIG. 31

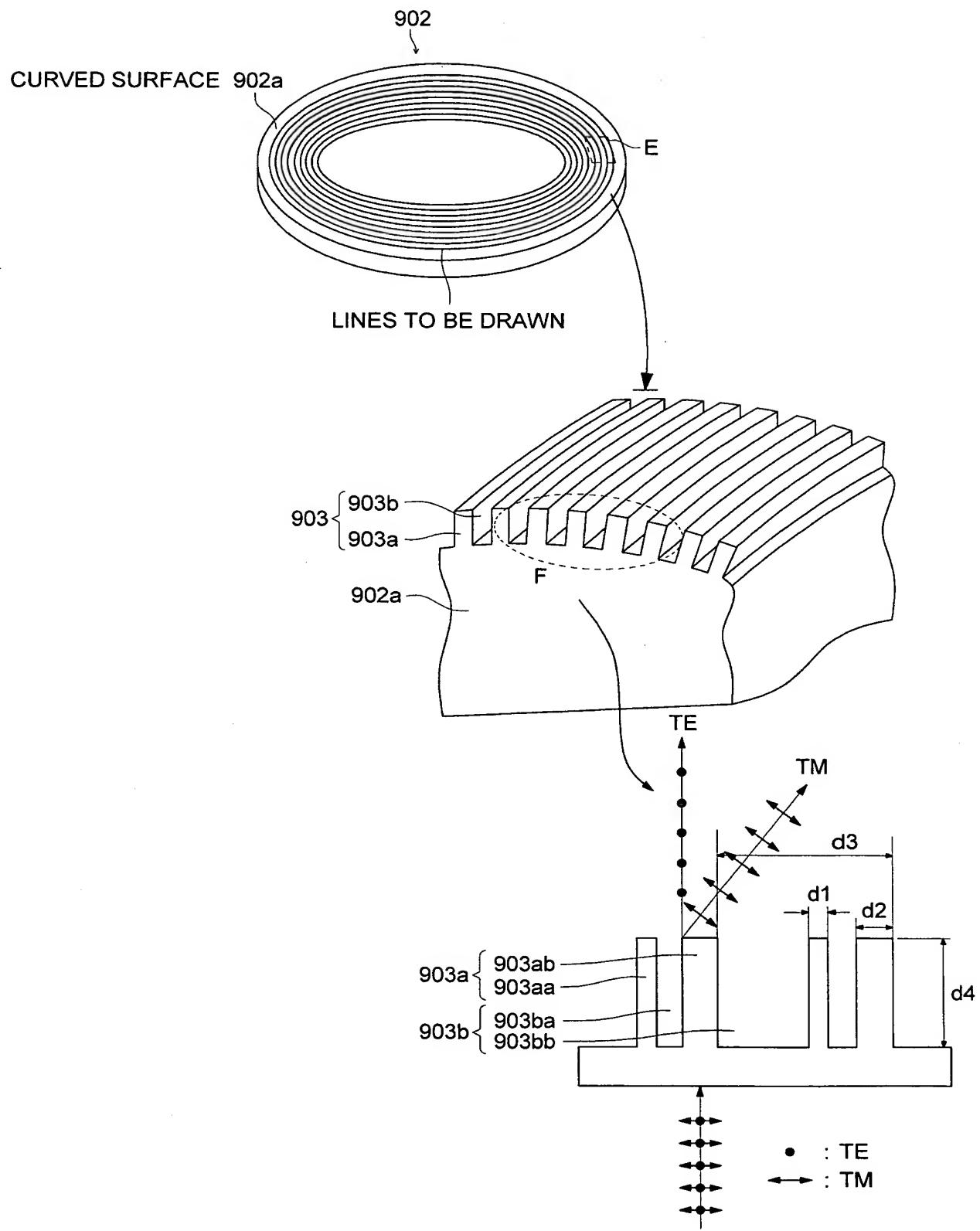
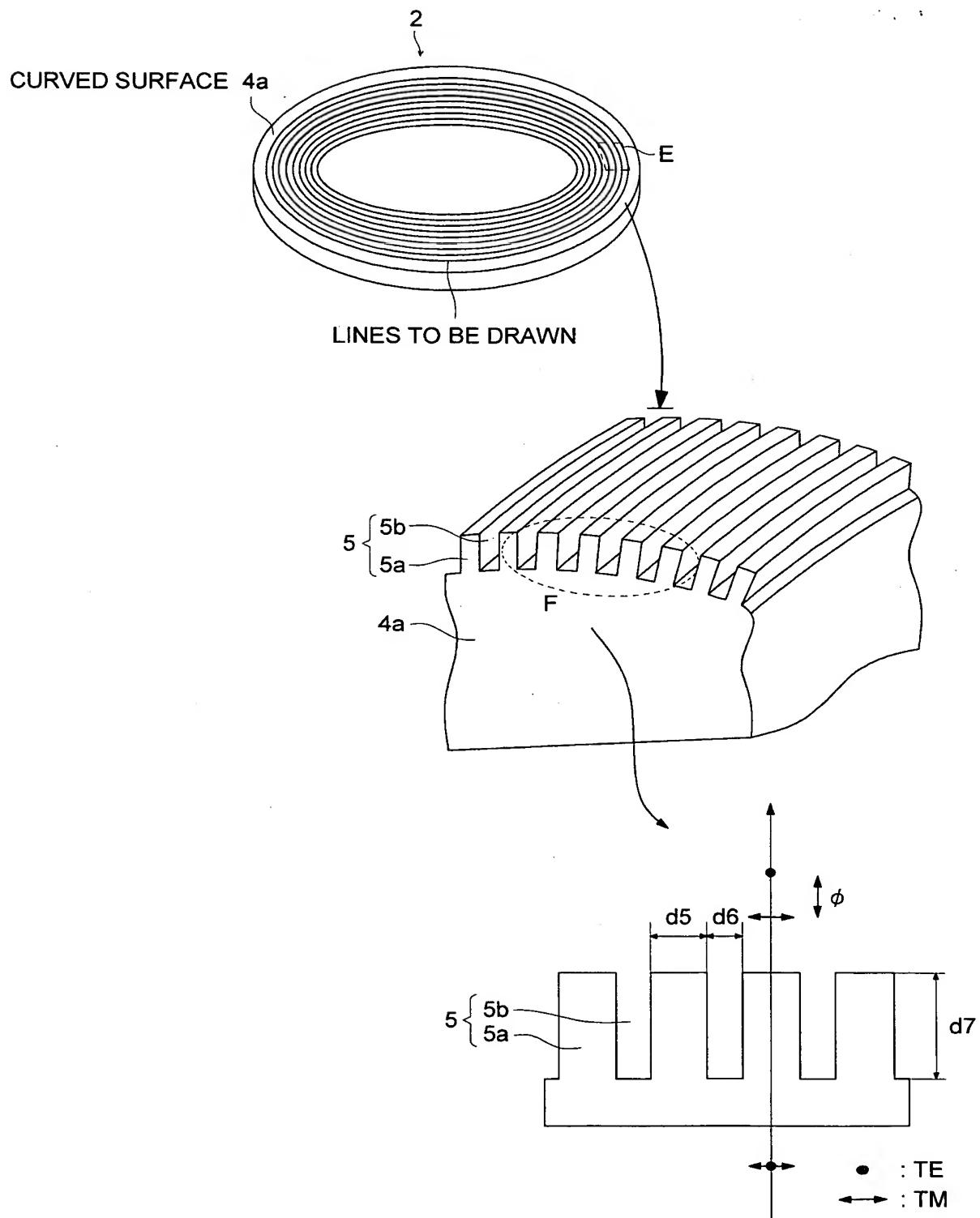


FIG. 32



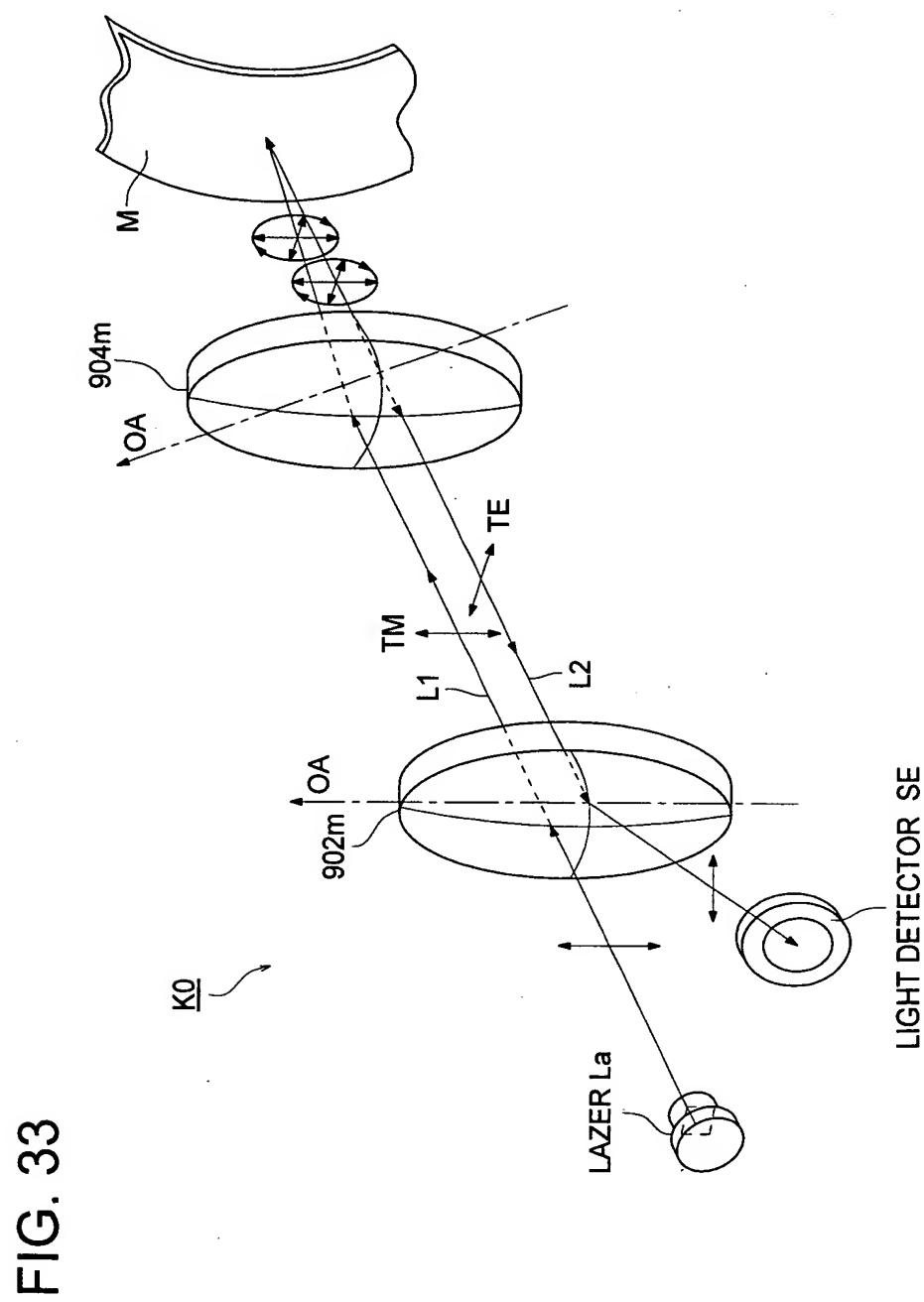


FIG. 33

FIG. 34 (A)

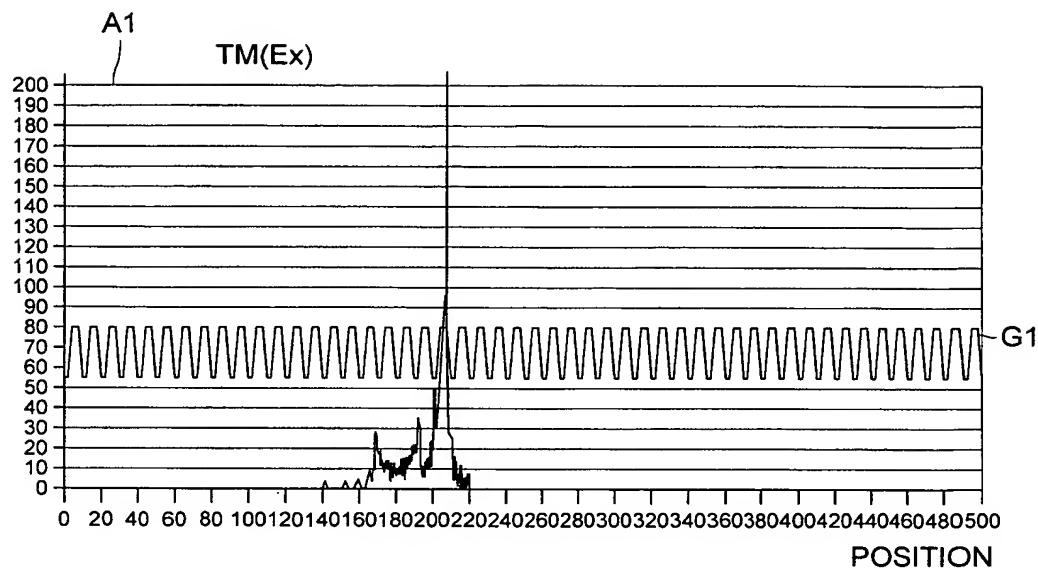


FIG. 34 (B)

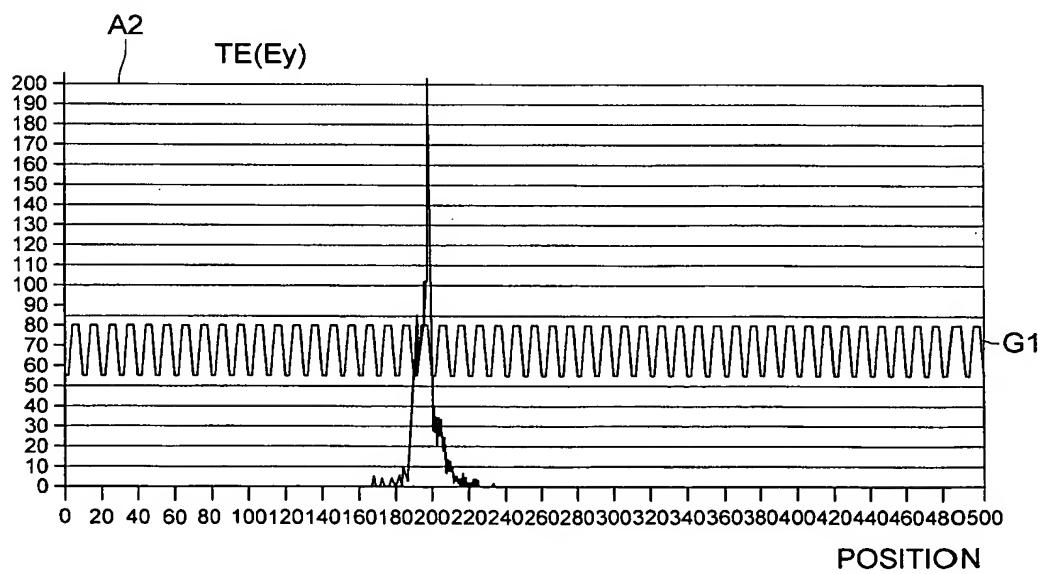


FIG. 35 (A)

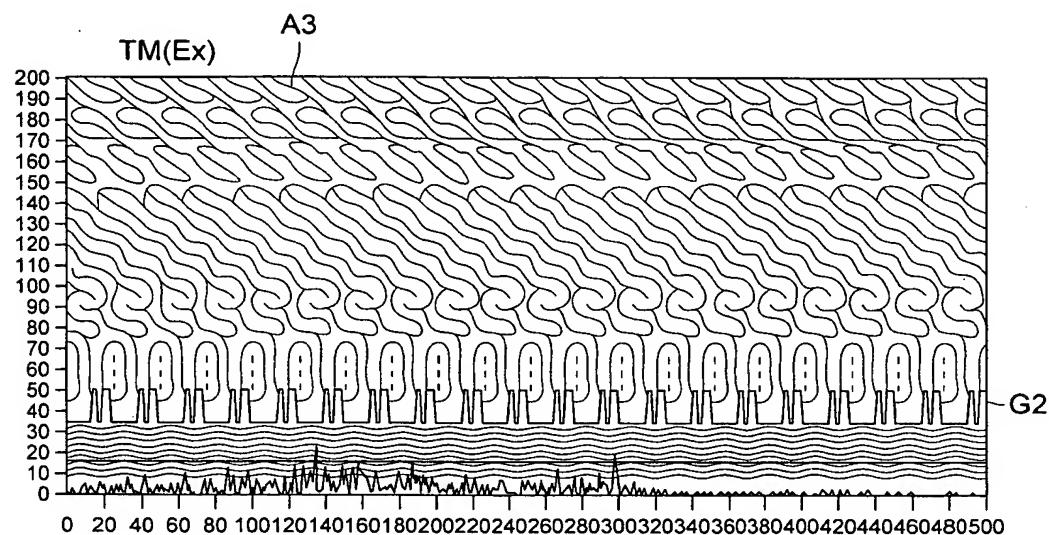


FIG. 35 (B)

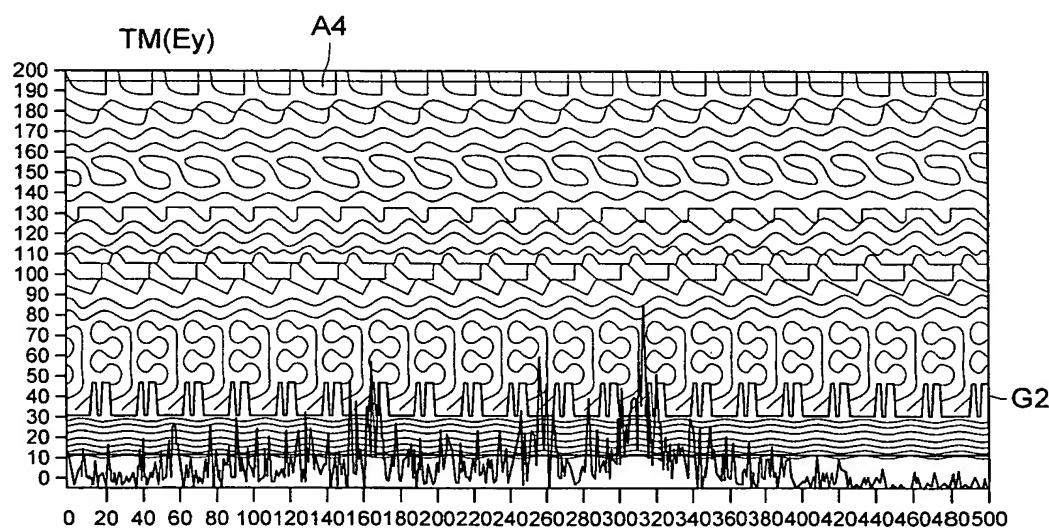
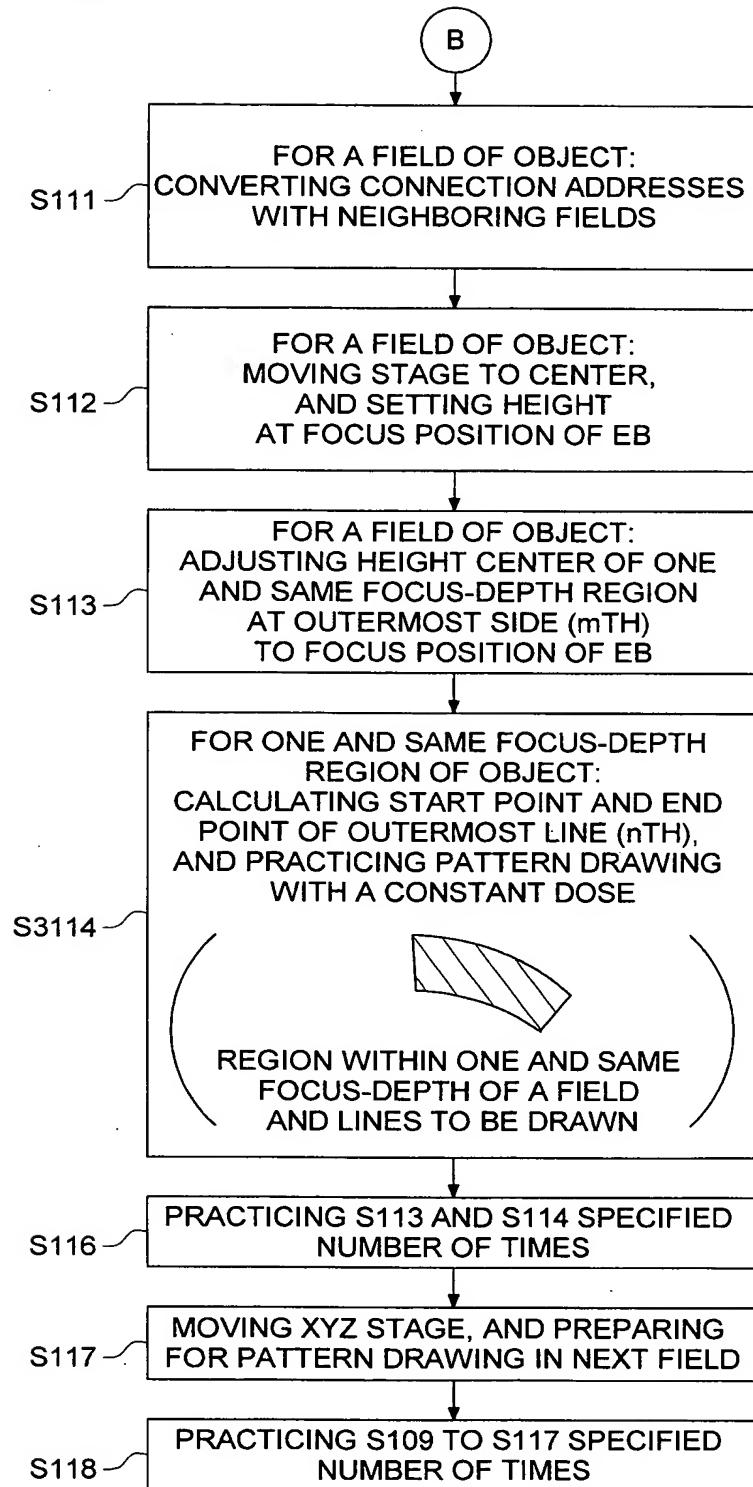


FIG. 36



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FIG. 37 (A)

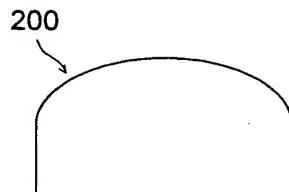


FIG. 37 (B)

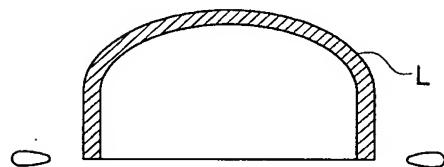


FIG. 37 (C)

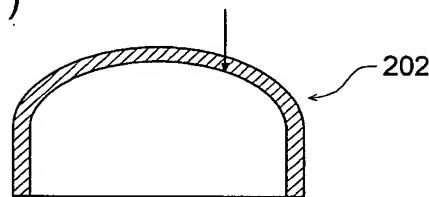
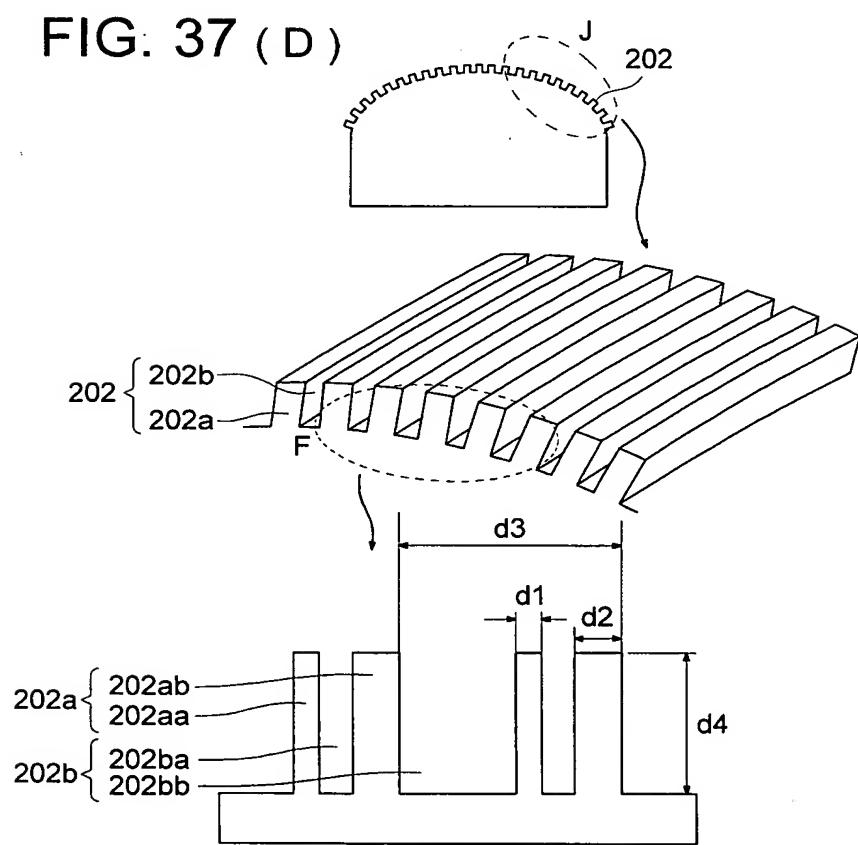


FIG. 37 (D)



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FIG. 38 (A)

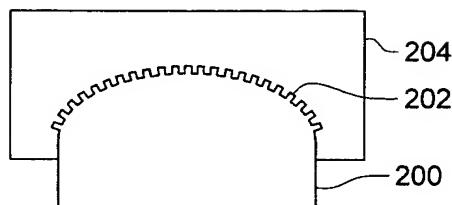


FIG. 38 (B)

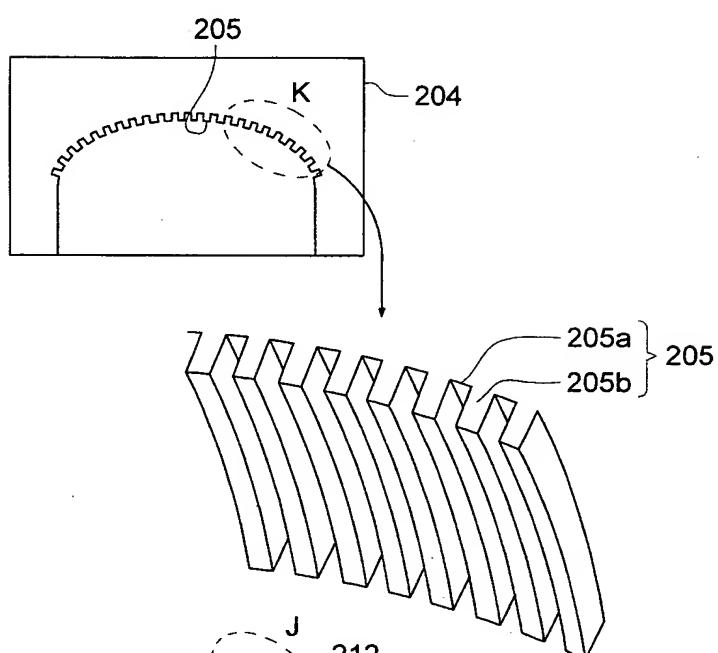


FIG. 38 (c)

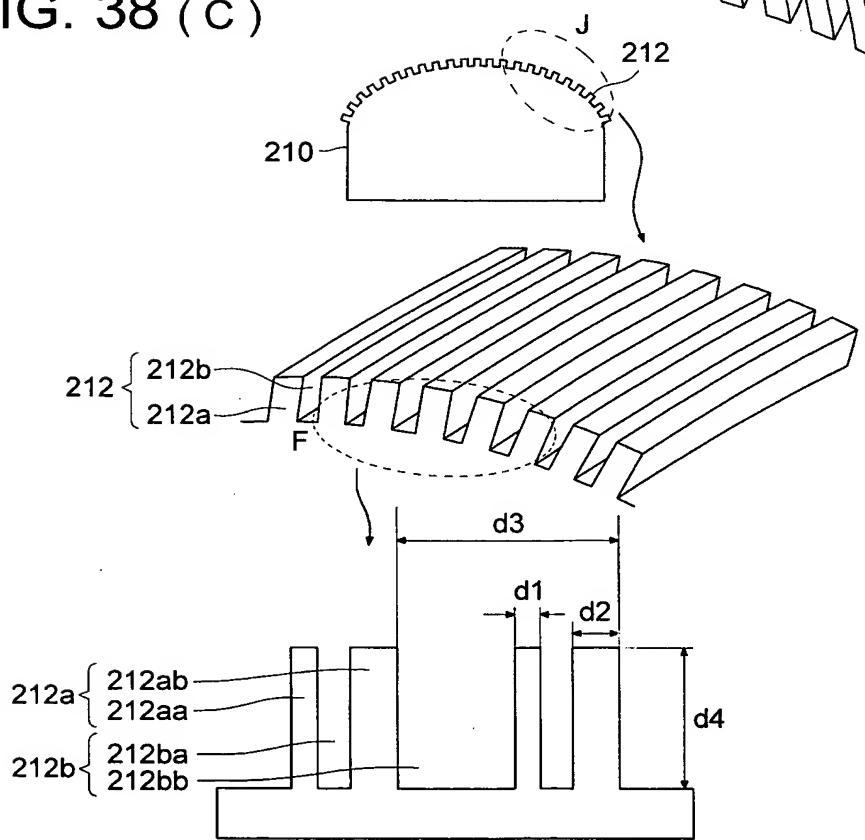


FIG. 39 (A)

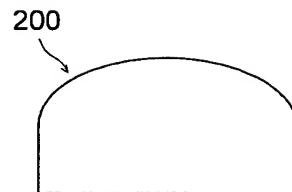


FIG. 39 (B)

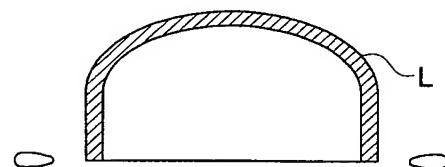


FIG. 39 (C)

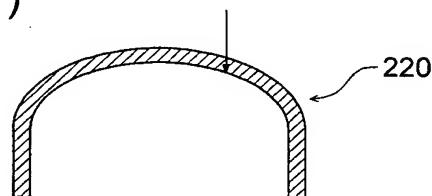
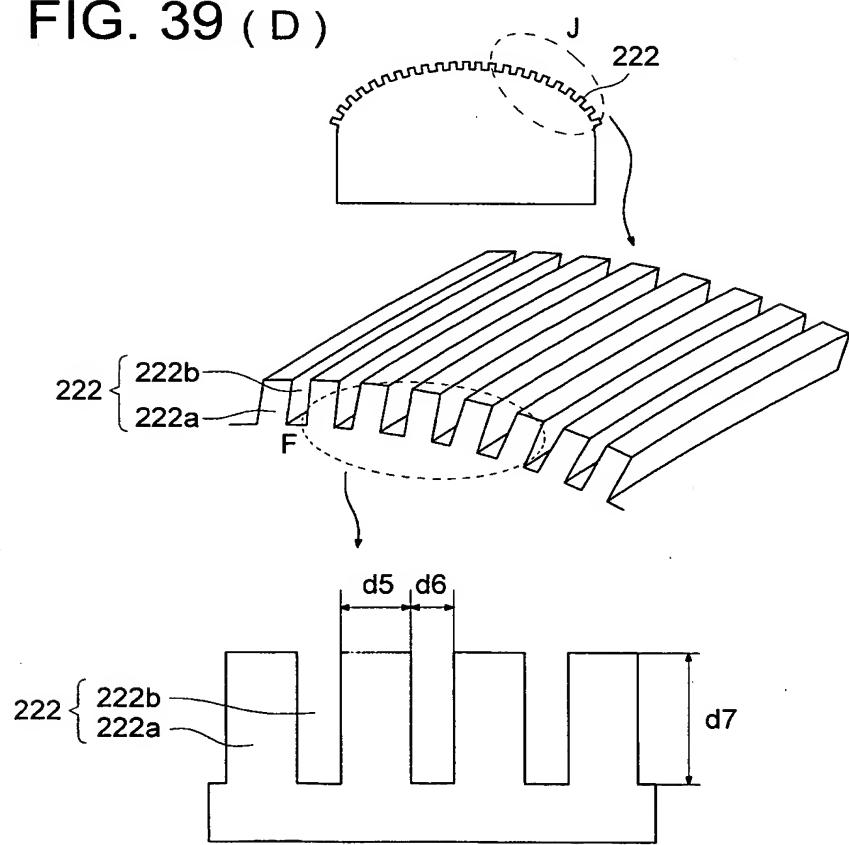


FIG. 39 (D)



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FIG. 40 (A)

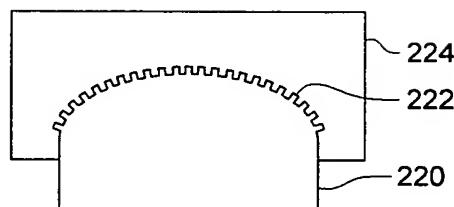


FIG. 40 (B)

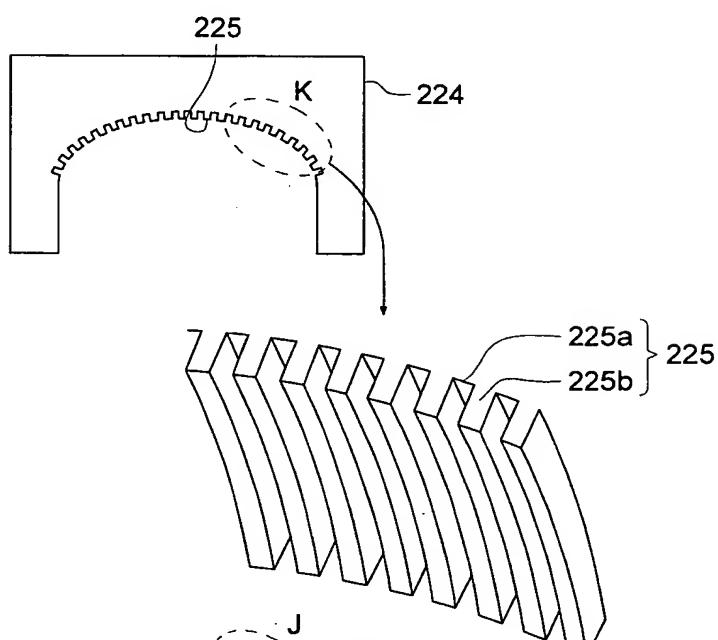
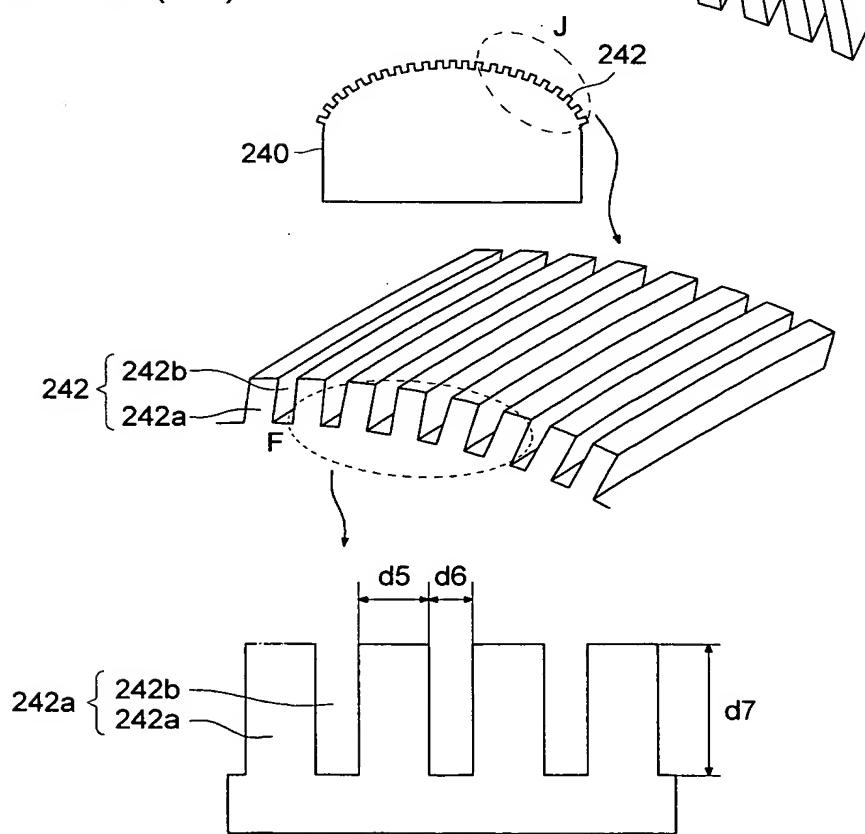
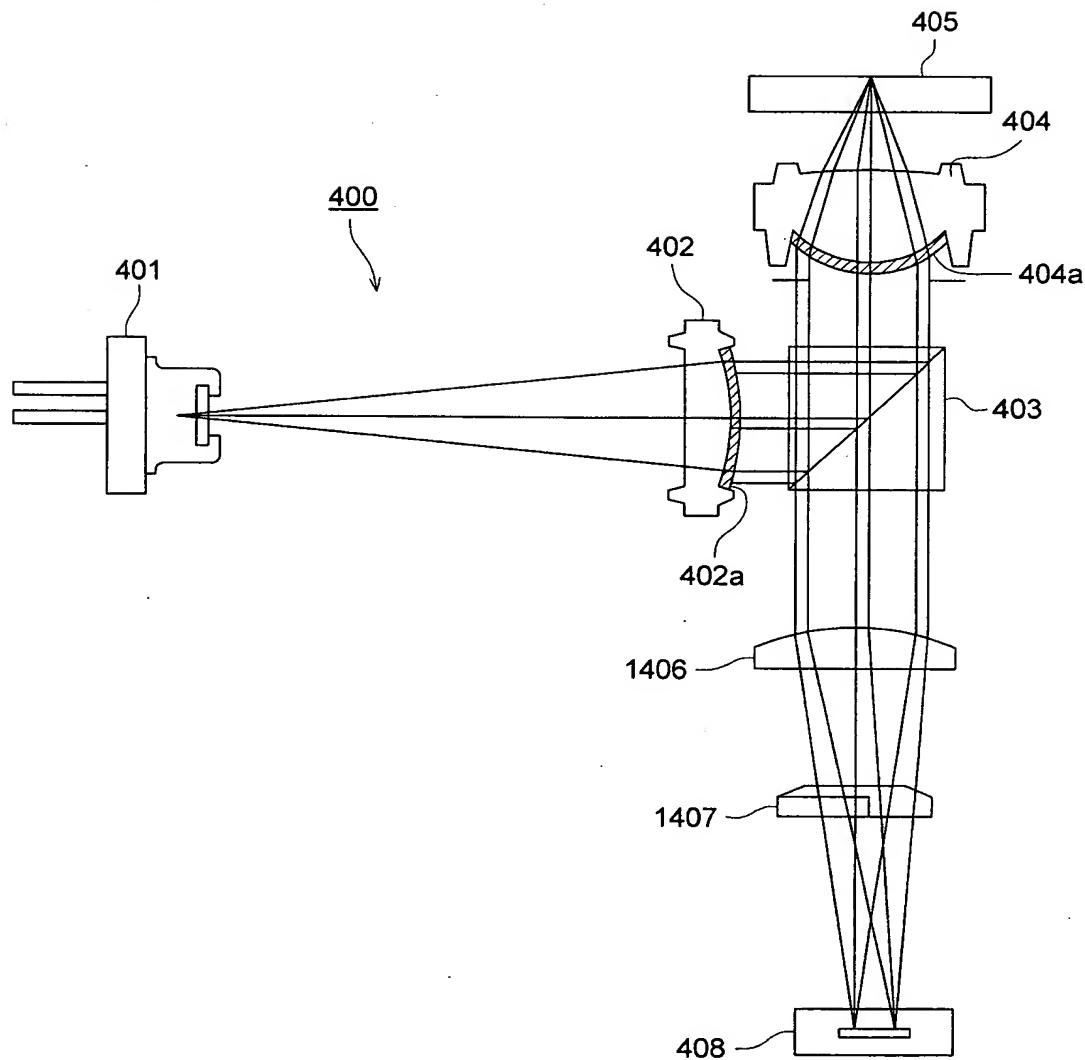


FIG. 40 (C)



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FIG. 41



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FIG. 42

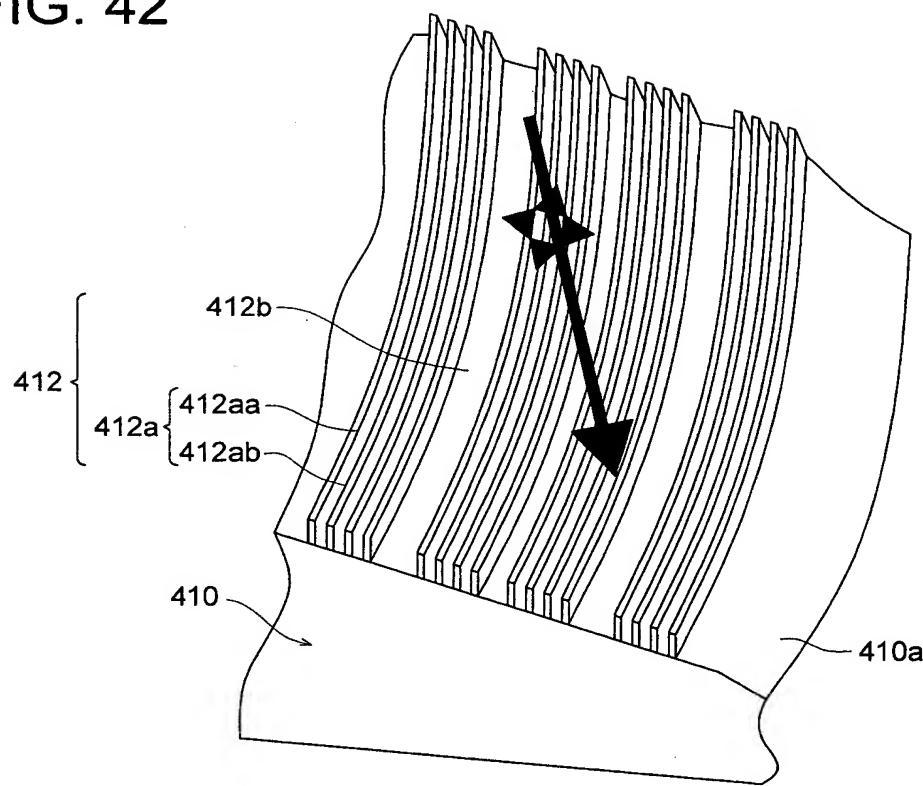


FIG. 43

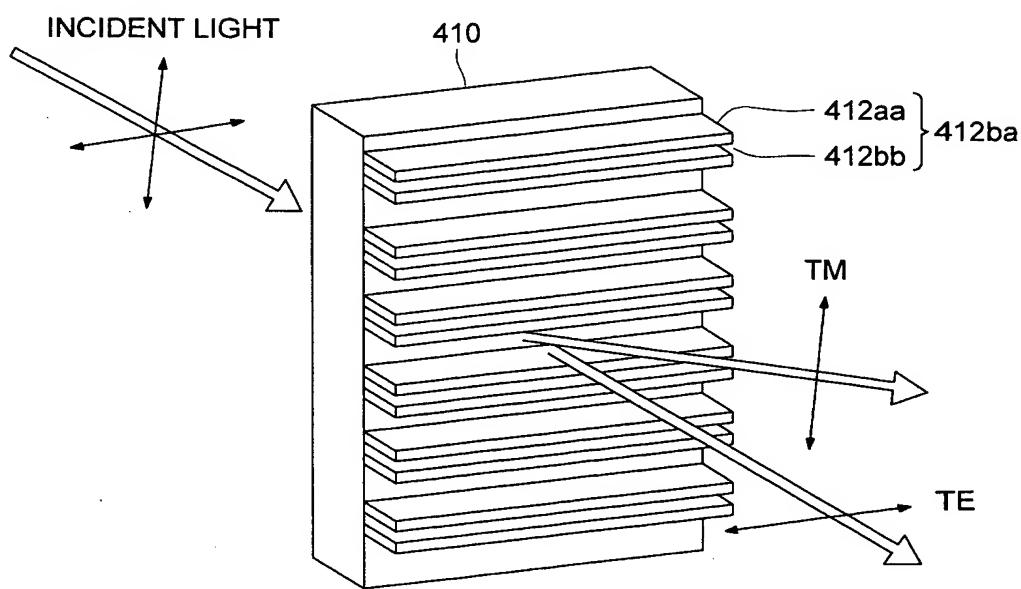
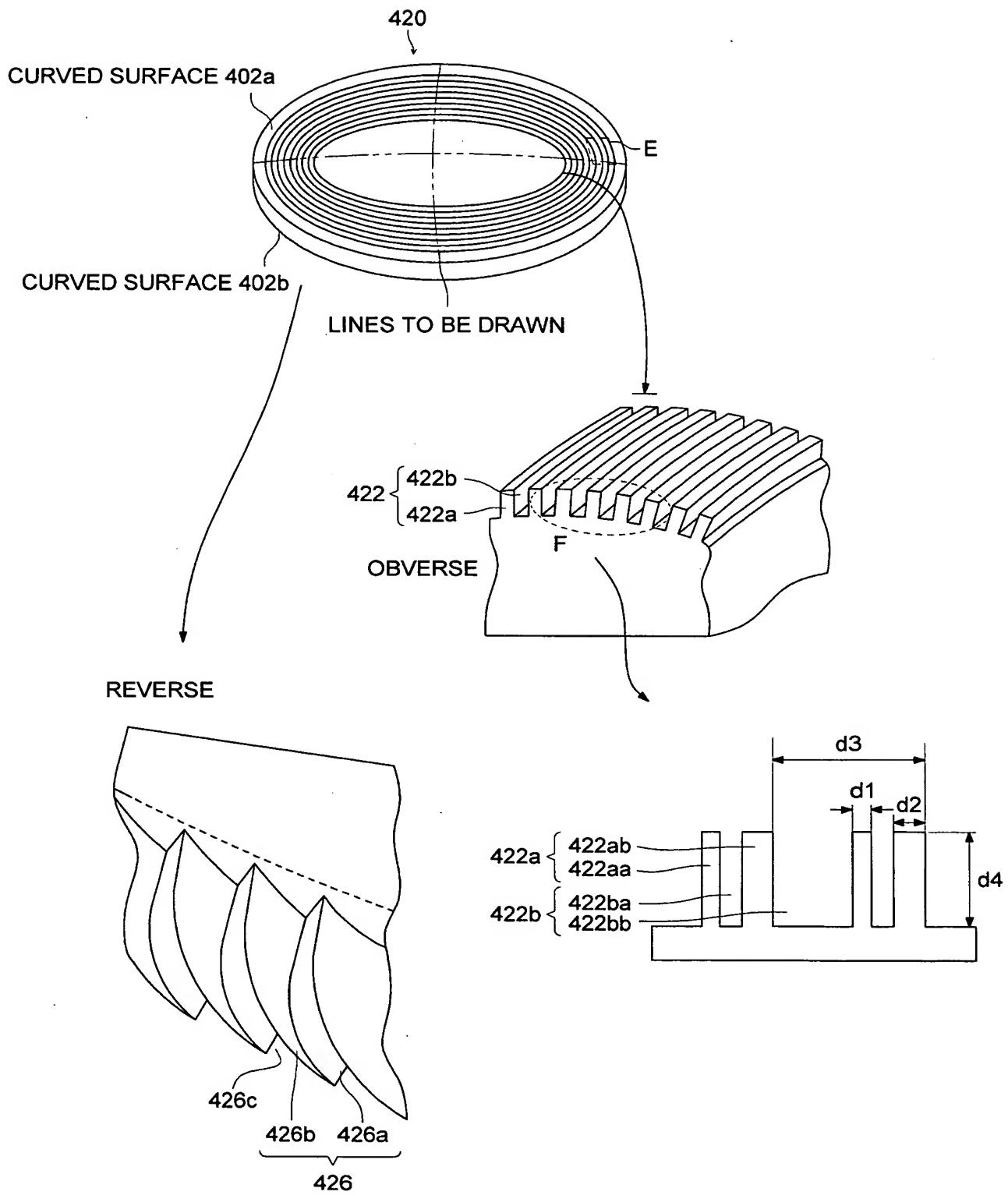
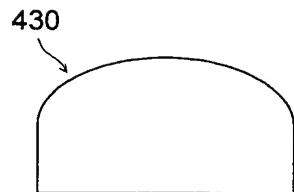


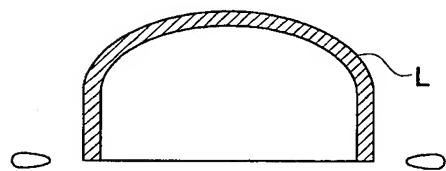
FIG. 44



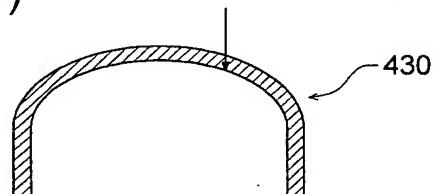
**FIG. 45 (A)**



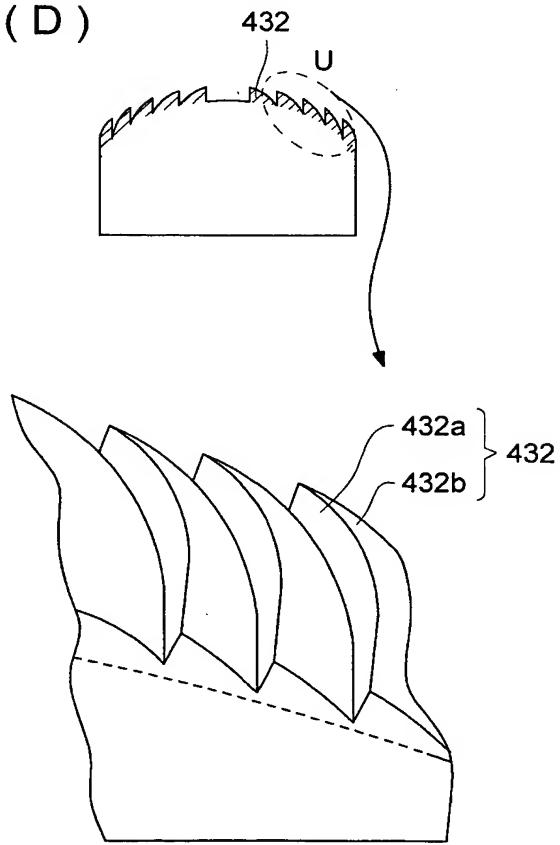
**FIG. 45 (B)**



**FIG. 45 (C)**



**FIG. 45 (D)**



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FIG. 46 (A)

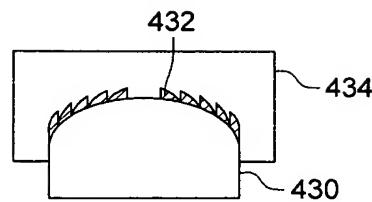


FIG. 46 (B)

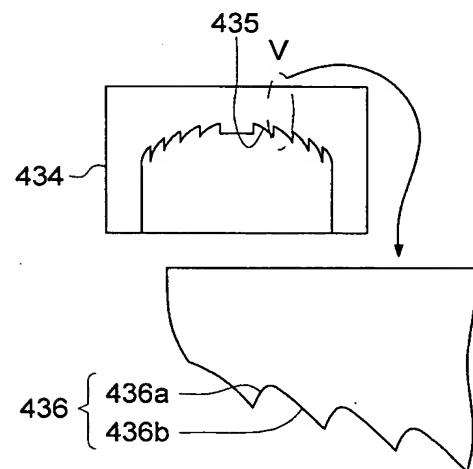


FIG. 46 (C)

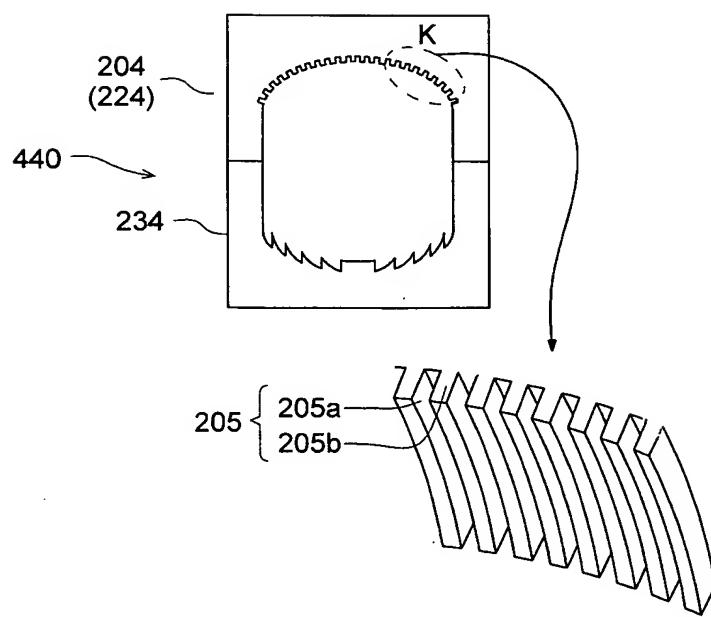


FIG. 47

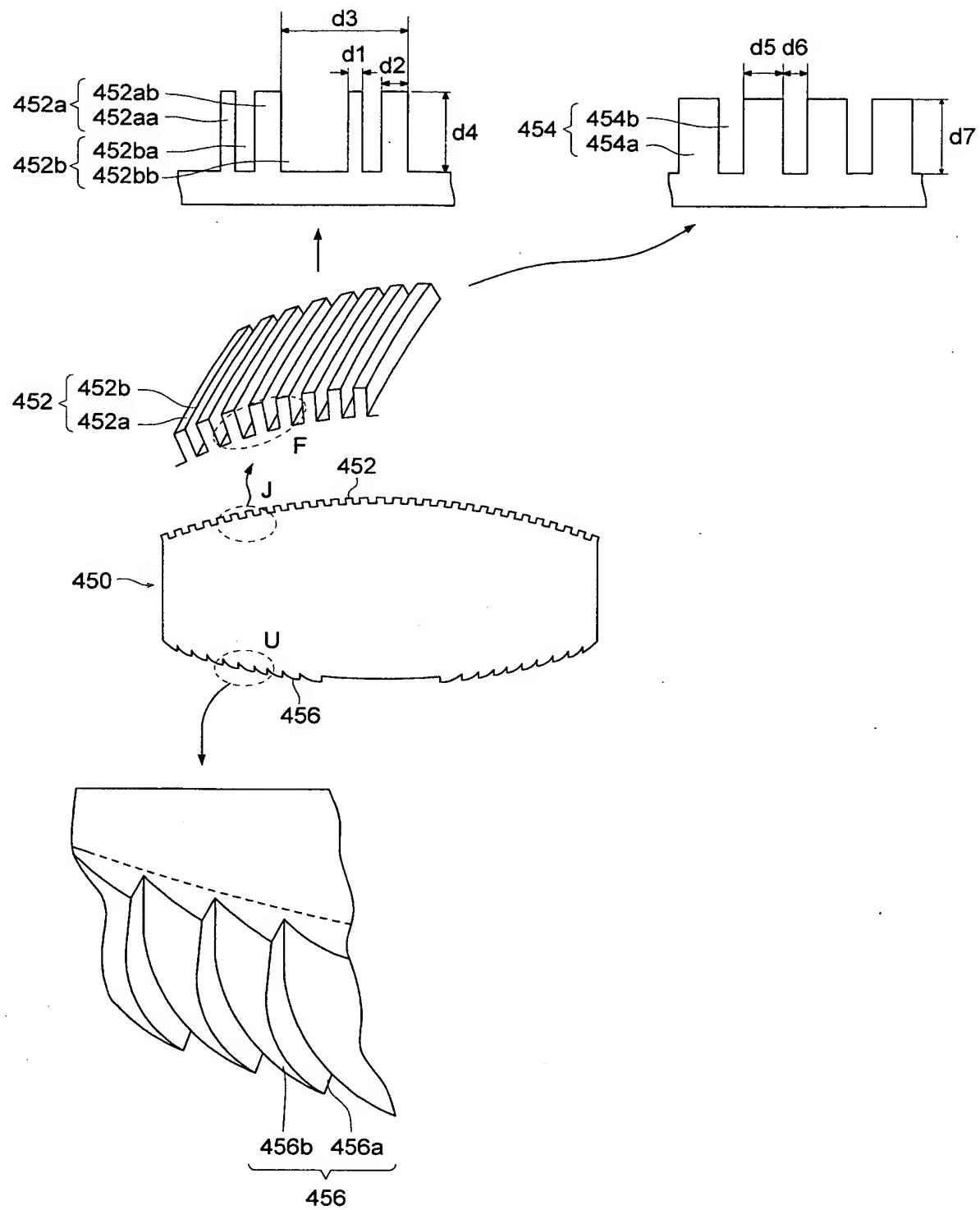


FIG. 48

